FIRST REPORT

OF

THE COMMISSIONERS

APPOINTED TO INQUIRE

INTO

THE ORIGIN AND NATURE, &c.

OF

THE CATTLE PLAGUE,

WITH THE

MINUTES OF EVIDENCE AND AN APPENDIX.

LONDON:
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PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1865.

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on 24 February, 2020

COMMISSION.

VICTORIA R.

VICTORIA, by the Grace of God of the United Kingdom of Great Britain and Ireland Queen, Defender of the Faith: To Our Right Trusty and Right Well-beloved Cousin and Councillor John Poyntz Earl Spencer, Knight of Our Most Noble Order of the Garter, Our Trusty and Well-beloved Robert Arthur Talbot Gascoyne Cecil, Esquire, (commonly called Viscount Cranborne,) Our Right Trusty and Well-beloved Councillor Robert Lowe, Our Trusty and Well-beloved Lyon Playfair, Esquire, Companion of Our Most Honorable Order of the Bath, Clare Sewell Read, Esquire, Henry Bence Jones, Esquire, Doctor of Medicine, Richard Quain, Esquire, Doctor of Medicine, Edmund Alexander Parkes, Esquire, Doctor of Medicine, John Robinson M'Clean, Esquire, Thomas Wormald, Esquire, Robert Ceely, Esquire, and Charles Spooner, Esquire, Greeting:

Whereas a contagious or infectious Disorder, which is generally designated the Cattle Plague, now prevails among the Cattle of Great Britain: And whereas We have deemed it expedient that a Commission should issue fully to investigate the Origin and Nature of the said Disorder, and to ascertain, as far as possible, the Mode of Treatment best adapted for the Cure of the affected Animals, and the Regulations which may with the greatest Advantage be made with a view to prevent the spreading of the said Disorder, and to avert any future Outbreak of it:

Now know ye, that We, reposing great Trust and Confidence in your Knowledge and Ability, have authorized and appointed and by these Presents authorize and appoint you the said John Poyntz Earl Spencer, Robert Arthur Talbot Gascoyne Cecil (commonly called Viscount Cranborne), Robert Lowe, Lyon Playfair, Clare Sewell Read, Henry Bence Jones, Richard Quain, Edmund Alexander Parkes, John Robinson M'Clean, Thomas Wormald, Robert Ceely, and Charles Spooner to be Our Commissioners for the Purposes aforesaid.

And for the better enabling you to carry these Our Royal Intentions into effect, We do hereby give and grant to you, or any Three or more of you, full Power to call before you such Persons as you shall judge likely to afford you any Information on the Subject of this Our Commission, and to inquire of and concerning the Premises by all other lawful Ways and Means whatsoever.

And We do by these Presents will and ordain that this Our Commission shall continue in full Force and Virtue, and that you Our said Commissioners, or any Three or more of you, may from Time to Time proceed in the Execution thereof and of every Matter and Thing therein contained, although the same be not continued from Time to Time by Adjournment.

And Our further Will and Pleasure is, that you Our said Commissioners, or any Five or more of you, upon due Inquiry into the Premises, do report to Us in Writing under your Hands and Seals your several Proceedings under and by virtue of Our Commission, together with what you shall find touching or concerning the Premises.

And We further ordain that you, or any Five or more of you, may have Liberty to report to Us your Proceedings under this Commission from Time to Time, should you judge it expedient so to do.

And for your Assistance in the due Execution of this Our Commission, We have made Choice of Our Trusty and Well-beloved Mountague Bernard, Esquire, to be Secretary to this Our Commission, whose Services and Assistance We require you to avail yourselves of from Time to Time as Occasion may require.

Given at Our Court at Saint James's the Twenty-ninth Day of September 1865, in the Twenty-ninth Year of Our Reign.

By Her Majesty's Command,

(Signed) G. GREY.

FIRST REPORT

OF

The COMMISSIONERS appointed to inquire into the ORIGIN and NATURE, &c. of the CATTLE PLAGUE.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

TERMS OF COMMISSION.

Your Majesty was pleased, by your Commission dated the 29th day of September 1865, to intrust to us the task of investigating the origin and nature of a disorder which now prevails among the cattle of Great Britain, and is generally designated the Cattle Plague, and of ascertaining as far as possible the mode of treatment best adapted for the cure of the affected animals, and the regulations which may with the greatest advantage be made with a view to prevent the spreading of the said disorder, and to avert any future outbreak of it. Your Majesty was at the same time pleased to ordain that we, or any five or more of us, might have liberty to report to you our proceedings under the Commission from time to time, should we judge it expedient to do so.

LEAVE TO REPORT SPECIALLY.

The terms of the Commission therefore authorize us, if we think fit, to report specially to Your Majesty on any part of the subject committed to us, reserving other parts of it for further investigation. The nature of the calamity under which England and Scotland are at present suffering, and which may at any moment attack Ireland, the extensive growth of the disease, its destructive character, and the imperfect success which has hitherto attended all endeavours to arrest its progress, make it clearly our duty to take this course, and to lose no time in humbly presenting to Your Majesty such Recommendations as, after careful consideration, we believe the emergency to require. We shall introduce them with a brief statement on the history of the disease and on its general character.

I.

OUTBREAK AND SPREAD OF DISEASE IN ENGLAND.

The disease, which is the subject of this inquiry, was first observed and recognized in Great Britain towards the close of the month of June. Two English cows had been purchased on the 19th June in the Metropolitan Cattle Market by a cowkeeper residing in Islington, in whose sheds they were when the symptoms of disease attracted, on the 27th, the notice of the veterinary surgeon in charge. Similar symptoms were observed on the 28th by the same surgeon in a cow belonging to a dairyman in Hackney, which had been purchased in the same place and on the same day. Two Dutch cows in a Lambeth shed, likewise bought in the market on the 19th, were attacked on the 24th. The malady broke out immediately afterwards in many London dairies, and spread with extreme rapidity, destroying great numbers of animals. The Islington cowkeeper lost her whole herd of 93; she afterwards bought more and lost them also, making 106 or 107 in all. An inspector who had charge of a great part of the north and north-east of London states that in his own district more than four fifths have either died or been slaughtered, and the general average within the precincts of the Metropolis is probably at least as high. Very early in July it appeared in Norfolk; a little later in Suffolk and Shropshire; then in one county after another, and before the end of the month it had invaded Scotland. In all the earlier cases at least it seems to have been directly traceable to purchases made in the Metropolitan Market; but Norwich Hill and other country markets speedily became, in their respective districts, subordinate centres of infection. On the 14th October it had extended into 29 counties in England, 2 in Wales, and 16 in Scotland, and was still advancing.

The subjoined tabular statement, prepared by the Veterinary Department of the Privy Council Office from such official information as that department has received from inspectors throughout the country, has already appeared in the public papers:—

	Attacked			Total Cases reported from the Commencement of the Disease.				
	Week ending Oct. 14.	Week ending Oct. 21.	Week ending Oct. 28.	Attacked.	Killed.	Died.	Recovered.	Remaining.
1. Metropolitan Police District	158	194	158	5,773	2,557	2,529	202	485
2. South-eastern Counties -	225	154	205	3,284	1,169	1,667	197	251
3. South Midland Counties -	73	94	230	833	373	282	42	136
4. Eastern Counties - -	141	183	335	3,081	1,051	1,482	161	387
5. South-western Counties -	17	11	3	116	51	45	7	13
6. West Midland Counties -	31	9	31	214	74	112	4	24
7. North Midland Counties -	8	32	18	109	54	41	6	8
8. North-western Counties -	28	39	42	176	55	75	6	40
9. Yorkshire - - -	26	39	113	253	66	126	11	50
10. Northern Counties -	47	86	34	472	212	201	24	35
11. Monmouthshire and Wales	43	60	38	180	51	110	4	14
12. Scotland - -	257	828	666	3,182	1,153	1,241	184	604
Total - - - -	1,054	1,729	1,873	17,673	6,866	7,912	848	2,047

It must be remarked however, that such statements as this cannot be accepted as accurate accounts—which, indeed, they do not profess to be—of the real state and progress of the disease. They represent such cases only as the several inspectors have been able to detect since they were respectively appointed. But information reaches the inspector indirectly, by accident, or by common report; and a butcher, jobber, dairyman, or farmer has strong motives for not disclosing to the inspector anything that he can easily hide. We were told by a London cowkeeper that, of 41 cows which died or were slaughtered on his premises, the inspector got only the knacker's receipt for the 11 that actually died of the disease. It must, therefore, we fear, be assumed that the cases reported form but a small proportion of those which have actually occurred; and it would be unsafe to draw from them any inference as to the amount of loss actually caused by the Plague.

IN THE NETHERLANDS.

Meanwhile, from the same general centre, the Metropolitan Market, it appears to have crossed the sea to Holland with some Dutch oxen which had been shipped from Rotterdam to London, had been exposed during three successive market days, and, not finding a sale at an adequate profit, had been re-shipped from London to Rotterdam. The disease broke out among them soon after their return, when they were pasturing at Kethel, near Schiedam, in a long strip of meadow, on which other strips abutted, each occupied by stock; it spread at once in many directions, and soon overran the whole province of South Holland, and thence, we believe, it has been from time to time re-imported into this country. The measures adopted in the Netherlands seem to have been at the outset less stringent than was desirable; too much discretion was left to the local authorities; but the provinces of North Holland, Utrecht, and Guelderland have, by strictly guarding their respective frontiers, protected themselves in a great measure from the contagion.

FRANCE AND BELGIUM.

In both France and Belgium importation from England has been prohibited, and stringent and minute regulations have been issued by the Government of each country with a view to extinguish the disease wherever it might break out. These measures appear to have been successful. Only a few isolated and somewhat doubtful cases have been hitherto reported from each of these countries.

SUPPOSED SOURCE OF THE OUTBREAK IN ENGLAND.

Twenty-three days at least before the first outbreak in London, a parcel of Russian bullocks, the first, it is asserted, that were ever brought direct from that country to England,* were sold in the Metropolitan Market by the importer, a London cattle-salesman. They had been shipped at Revel and landed at Hull; part of them had there been sold, and sent to various places in the north of England, and the rest despatched to London. The southern provinces of Russia are, if not the birth-place, the constant home of a disease which, as we shall hereafter show, is identical with the Cattle Plague, and to this cargo the introduction of the Plague into England has been often and confidently ascribed. Some obscurity hangs over the earlier history of the transaction. That the province of

* A copy of an entry from the books of the London Custom House has been sent to us, from which it would appear that 20 Russian oxen were landed at London from St. Petersburg on the 4th July 1860. The point is of no importance.

Esthonia, where the cattle were contracted for, and where the bulk of them, at least, were collected, was at and before the date of the shipment free from the Plague is certified by authority which we should be reluctant, and have indeed no ground, to question. But it is alleged by the importer's agent, who procured and shipped the animals and had charge of them on the voyage, that a few (13 out of 321) were not Esthonian, but part of a larger lot brought in vans from the neighbourhood of St. Petersburg to make up the number required; and he further alleges that out of this lot two were ill at Revel with a disease which he believes to have been the Cattle Plague. This part of his story is flatly contradicted by his principal, as his assertion that the animals were not examined on landing is by the Customs' Inspector at Hull.* It must be added that he does not know the disease otherwise than by description—that of the 321 imported none appear to have shown any signs of disease, except one, which was ill on the voyage, but looked well when it reached London—and that no animal is proved to have contracted the disease in the Metropolitan Market from the 1st (the date of its supposed introduction) to the 19th (that of its supposed transmission to the Islington, Lambeth, and Hackney cows), a negative circumstance of no great weight, since an early case of the malady may easily have been mistaken for one of pleuro-pneumonia, but not to be left out of consideration. The facts then, though by no means inconsistent with the theory which attributes the appearance of the Plague in England to the Revel cargo, fall far short of establishing that theory, unless we assume that the event cannot possibly be accounted for in any other way. Further inquiry may throw new light on the question. At present we are not able to pronounce a decided opinion on it; nor, for the practical conclusions which we are about to offer, is it material on which side the truth lies.

ANOTHER SUGGESTED EXPLANATION.

Another explanation has been suggested in the following extract of a letter from Her Majesty's Consul-General at Hamburg:—

"Mr. Schrader, an intelligent veterinary surgeon, who is specially employed by the Hamburg Government to examine cattle and sheep shipped for foreign ports, has informed me he thinks it most probable that the murrain has been introduced into England by importation from Holland. He states that in the course of the last spring a considerable number of Hungarian cattle were conveyed from Vienna into Holland through Germany by land carriage and river navigation; that at the same time the rinderpest had broken out in the neighbourhood of Vienna, particularly in the village of Florisdorf; and that in the month of May a number of cattle at or near Utrecht in Holland had been attacked by it. Although, therefore, the murrain in Holland broke out with much greater violence at a later period of year, it would be quite possible that it passed from the Dutch ports into England so early as the month of May last. With respect to the rumour of diseased cattle having been imported into England from the Russian port of Revel in Esthonia, either directly or by way of Lubeck, no credit is attached to it here, and indeed the great distance of Revel both from Great Britain and from the cattle districts in Southern Russia, seems to render it unlikely that diseased cattle should have reached England from that port without any observation."

IMPORTATIONS FROM HUNGARY AND GALICIA.

One fact mentioned in this letter, and which has also been elicited in evidence, deserves particular attention, since it is of more than historical importance. Hungarian and Galician cattle now undoubtedly come in considerable numbers to the English market. "Large quantities," says one dealer, "are sent every week." Hungary and Galicia, from their neighbourhood to the steppe country of Russia in Europe, are often attacked by the Plague, and Hungary at least has suffered severely from it during the present year. The completion of the two great lines of railway which, traversing central and southern Germany, now connect Hamburg and Rotterdam with both Vienna and Lemberg, have opened to us these new supplies. Respecting the average duration of the transit we have no precise information, nor do we at present know how far it may be abridged in particular cases, nor by what regulations it is guarded at the beginning or end of the journey. We may have occasion to recur to this point hereafter; at present we advert to it only as suggesting a possible solution of the question how the Cattle-Plague reached England.

II.

THE DISEASE CONTAGIOUS.

GENERAL CHARACTER OF THE CONTAGION.

That the disease in question is contagious, that the contagion is extraordinarily swift and subtle, and that it is most destructive in its effects, there can be no doubt whatever. The manner in which it has spread, travelling perceptibly, for the most part, in the track of animals brought from some centre of infection, and establishing a new centre wherever

* It is proper to add that we have been furnished with the original certificate, dated the 29th of May, and signed by the two veterinary surgeons who were charged with the examination of the cargo, that they had examined it, and that it was sound and free from disease, as well as with a subsequent declaration by them to the same effect.

it has been suffered to effect a lodgment—the very difficulty that has been often found, even where the fact of infection was certain, in tracing the exact means by which the infection was conveyed—the havoc it has made in open pastures not less than in the London cowsheds, and against which fresh air, wholesome food, and careful tending seem to have afforded no defence, would be quite enough to establish these conclusions, even if no light were thrown upon them by past history, or by the experience of other countries. Of the witnesses, indeed, whom we have examined, even those who believe it to have been spontaneously generated here, acknowledge that it is contagious, and (with hardly an exception) admit that it is new in England.

IDENTICAL WITH THE *RINDERPEST* OR STEPPE-MURRAIN.

But we see no reason to question the evidence which has been produced before us proving that it is the same disease as that which has been long known under the name of the *Rinderpest* (Cattle Plague), or steppe-murrain. The symptoms during life, the results of post-mortem examination, and the whole train of general characteristics, are precisely the same, or varied only by such minute shades of difference as we might expect to find in different breeds and climates. A comparison of what we see with the full descriptions contained in foreign medical works leaves on this head no doubt at all; and no doubt is entertained by competent and trustworthy witnesses who have had and used opportunities of personal observation both here and abroad. The whole experience gained of it in countries where it is not, as here, a stranger, —countries frequently infested by it, where its effects are perfectly well known, its nature has been carefully studied, and the strictest measures have been devised and are enforced by law to detect and extirpate it as often as it crosses the frontier,—becomes, therefore, at once available for our guidance. These measures are wholly based on the view that the disease propagates itself by contagion, and by contagion alone, and the extreme stringency of them proves in the most forcible manner the virulence and activity of the evil which they are designed to keep at bay. They are measures indeed which never could be enforced,—they involve sacrifices to which no people could be reasonably asked to submit,—unless in the presence of a dreaded enemy, and under a sense of overwhelming necessity. The same view is, we believe, universally held among the eminent veterinarians of Germany, men of high education and intelligence, and it has recently been endorsed by the Congress of veterinary surgeons held at Vienna in August last, which was attended by members of the profession from almost every country in Europe.

EARLIER CATTLE MURRAINS IN ENGLAND.

This is not, however, the first time that this Plague has visited England. Fatal murrains among cattle, analogous to, if not identical with, it, have at various times appeared here. In 1348–9, after the Black Death had produced great mortality among men, a grievous plague attacked cattle, which perished by thousands. A great rise in the price of food followed, notwithstanding an abundant harvest. The diseased cattle were slaughtered, and infected herds were as much as possible separated from those which were sound, while the herdsmen who attended the former were not allowed to come in contact with the latter. About a century later, in 1480, a second murrain of the same kind committed great devastation. There is no accurate account of the symptoms exhibited by cattle attacked during these murrains, and we are therefore unable to ascertain whether they were different from or identical with the present disease; but there is every reason to believe that the distemper which in 1715 made a brief inroad but was promptly expelled, and which in 1745 renewed the attack and held its ground till 1757, was exactly the same as the present Plague. Of this we have proof in the descriptions extant of the symptoms then observed, and of the morbid appearances after death. In a paper communicated to the Royal Society in January 1746 by Dr. Mortimer, he ascribes the origin of the murrain to two calves imported from Holland by a farmer living near Poplar, early in 1745. The spring and summer had been very wet, the autumn dry and cold, the early winter cold and damp. The disease communicated to the cows of this farmer spread through Essex, reached London, and was propagated in various directions from the metropolitan markets. It entered Berkshire, however, by two cows bought at a fair in Essex. Almost simultaneously with its appearance in London, a violent distemper broke out among the horned cattle of Argyllshire, sweeping off 6,000 beasts; but there is no exact information as to the nature of the Scotch murrain. The disease for some time advanced in a manner which appeared to justify the Government in treating its attacks as mere local outbreaks, and it was nearly a year after its first appearance that the country became sufficiently aroused to use national measures for the repression of it. But by this time it had taken too deep root for these to be effective. A Commission for Middlesex was appointed on the 25th November 1745. The Commission, with the short experience of 1715 to guide them, appointed various cowkeepers and butchers as inspectors of cattle, and instructed them :—

1. To inspect cowhouses and to separate sick from sound cows.
2. To see that all cowhouses and yards were kept thoroughly clean.
3. To kill all sick cows and calves, to slash their hides so as to render them useless, with several cuts from head to tail and round the body, and then to bury them in graves ten feet deep, with two bushels of unslacked lime to each cow.
4. To certify to the destruction of cows, for each of which the Treasury gave 40*s*.
5. To see that proper returns were made by cowkeepers as to their losses.

The disease having spread beyond Middlesex, an Act was passed and received the Royal Assent on the 13th February 1746, empowering the Crown to issue, through the Privy Council, rules and directions in order to prevent the distemper spreading amongst horned cattle.

On the 12th March 1746, an Order in Council was passed in which the incurable nature of the malady is set forth and the following regulations appear:—

1. Cowkeepers must shoot infected beasts, and bury them entire with slashed hides, four feet deep covered with lime. (The direction as to the use of lime was subsequently revoked.)

2. All hay and litter used by diseased animals must be burned. No herdsman who has attended a diseased beast is to go near a sound one without changing his clothes.

3. Infected sheds must be thoroughly washed all over, then disinfected with burning sulphur, &c., again repeatedly washed with vinegar and water, and not used for two months.

4. Convalescent animals are not to be mixed with sound ones for one month, and not then till they have been well curried and cleansed with vinegar and water.

5. Flesh and entrails of diseased cattle are not to be given as food to other animals.

6. No man whose herd is infected is to be allowed to drive any cattle, whether diseased or not, beyond the boundary of his farm. And even when disease has disappeared, his herd is to be held infected for a month.

7. Local authorities, such as churchwardens, overseers, constables, or cattle-inspectors who may be appointed, are charged to see to the execution of this Order. They are to report to each meeting of Justices and make exact returns.

8. These local authorities are to persuade owners to divide up their herds into separate parts; they are not only to see to the burying of diseased cattle, but also the burial of all infected dung.

9. Cattle travelling on roads are to be stopped and examined.

10. Houses, buildings, or yards used for cattle, sound or diseased, are to be carefully kept clean.

11. Compensation for slaughtered cattle is to be paid at the rate of 40*s*. per head; for calves 10*s*.

Towards the end of the year the Government found that the local authorities had not assisted them vigorously in the execution of the first Order, and they isssued a second to the effect that from the 27th December for three calendar months no person shall send to fairs or markets any cattle except for immediate slaughter, or "buy, sell, or expose to sale" any cattle except those which are ready for immediate slaughter. Nor is this privilege of selling fat cattle permitted to any one whose herd is infected. Therefore all beasts going to fairs or markets must be provided with passes from a Justice, or, failing him, from other competent local authorities, given on the owner's oath that his cattle are and have been for a month free from the Plague.

No raw hides shall be sold or allowed to be transported without like passes, but hides and horns of diseased beasts must absolutely be destroyed, and a compensation of 10*s*. per hide is given.

A third Order in Council was issued, proscribing the district from the Humber and Trent, and not allowing cattle to be driven out of it northwards from the 19th December 1747 to the following 27th March.

On the 13th February 1747 an Act to amend and extend the powers of the previous Act was passed; and this was followed, up to 1757, by various continuing and enlarging Statutes. In addition to the measures before specified, these Statutes also provided that sales of cattle should only take place when the seller had had them in his possession for 40 days; calves were not allowed to be sold, in order that they might be preserved for breeding purposes, and severe restrictions were put on the sale of the hides of diseased animals.

Various Orders were issued during the year 1747, stopping local fairs, and empowering local authorities to do so when they found it expedient.

The Plague in consequence of these Orders was extinguished where the local authorities acted with vigour, but lingered in other places, from whence it spread after a

time as rapidly as ever. In consequence of this, in September 1747 there is a new suspension of all fairs and markets and of all movements of cattle, except for slaughter, throughout the kingdom for three months. This was modified afterwards, sound lean cattle being allowed to be changed to clean pastures, and cows being allowed to go to bulls when both were sound.

The same result followed this new Order as its predecessors. The disease was extinguished in many counties, but lurked in others where the local authorities had been lax in looking after the execution of the Order. Hence in December 1749, the Council admits its failure in putting down the disease, and now again prohibits all movement of cattle except for slaughter, and the place of slaughter must be within two miles of the spot where the cattle are on the 14th December 1750.

The requirement that cattle should be slaughtered only within two miles of their stalls was found very grievous by London and Westminster, and the outcry raised against it by these influential places produced a revocation of it within a month of its issue.

"Unfortunately," says Mr. Youatt, in his well known work, "the restrictions with regard "to the sale or removal of cattle and communication between different districts were so "frequently evaded, that it was either impossible or impolitic to exact the penalties." (Youatt, *Cattle, their Breeds and Diseases*, p. 391.) The system of compensation was carried on for some years until the Government found it produced serious frauds. Every animal that was ailing, or had diseases of any kind, was killed and charged to the Government as having died by the Plague, and in consequence of these frauds compensation was abandoned. One cause of the ill success of the repressive measures adopted, is thus described in the words of Layard, who, writing even in 1757, says: "The disease, thank God, is considerably abated: and only breaks out "now and then in such places where, for want of proper cleansing after the infection, or "carelessness in burying the carcases, the putrid *fomes* is still preserved, and is ready, "at a proper constitution of the air, or upon being uncovered, to disperse such a quantity "of effluvia, that all the cattle which have not had it will be liable to infection." (Layard, *The Distemper among Horned Cattle*, p. xx.)

For some time after the revocation of the Order of 1749, each county proscribed neighbouring infected counties, and refused to receive their cattle. The roads from one county to another were strictly guarded, and cattle, hides, carcases, and tallow from any infected counties were carefully excluded. These measures, however, had but a very partial effect. Cheshire lost in the first half of 1757 and three months of the preceding year about 30,000 head of cattle, and many other counties in proportion. For the next two or three years this local war against the disease was allowed to be waged, the Government occasionally interfering when the magistrates permitted fairs in places likely to be injurious to neighbouring counties It continued up to 1756 with considerable variations, the Plague being intense in some counties, milder in others, and absent from many, until it wore itself out. There is no accurate record within our knowledge of the mortality produced by it. In the third year of the attack 80,000 head were slaughtered under the Orders in Council, and a far larger number perished by the disease. During its course it must have destroyed several hundred thousand cattle.

THE DISEASE IN COUNTRIES BORDERING ON RUSSIA.

There was some dispute as to the means by which England received its infection in 1715 and 1745, but it is certain that the Plague was raging in different parts of western Europe at that time. Wherever during war Russian and Austrian parks of cattle followed the movements of armies, the Cattle Plague appeared, and spread gradually to the adjacent countries. France in this way received it at least half a dozen times in the last century.* From 1711 to 1714 foreign authors state that western Europe lost 1,500,000 head of cattle by the Plague; while from 1745 to 1748 (a period which includes three years of the great English attack) 3,000,000 are believed to have perished in western and central Europe. These figures are probably not exaggerated, considering the great losses sustained by particular states. Thus the Danish monarchy, in the four years from 1745 to 1749, lost 280,000 head, and Holland, in the three years beginning with 1769, lost 395,000 head. These disasters attracted the attention of Governments and scientific men; and the long peace which began in 1816 permitted the adoption of those careful and systematic measures of precaution which, in the countries bordering on Russia, have been maintained ever since with various modifications, and on the whole

* Much interesting information on this part of the subject is contained in a memoir by M. Renault, President of the Veterinary School of Alfort, transmitted to the French Minister of Agriculture, and published in several French and English newspapers.

with considerable success. It was ascertained that Europe usually received the infection through Russian steppe cattle sent into Poland and Hungary. These cattle feed in vast numbers on the luxuriant herbage of the steppes in the Russian provinces watered by the lower part of the Dnieper and its tributaries. Large herds of them are annually driven to different parts of Russia, to Poland, Galicia, and Hungary, and often carry the seeds of disease in their train. In 1862 the number attacked by the plague in the Austrian dominions was 296,000, of which 152,000 died. In 1863 it again invaded and overran not only Galicia but the whole of the kingdom of Hungary and its dependencies, the Bukowina, Dalmatia, Carniola, Lower Austria, Moravia, and Styria. Fourteen per cent. of the cattle in these countries took the infection, and the average mortality, as stated in Schmidt's *Jahrbuch der Gesammten Medecin*, 1865 (p. 95), was as follows :—

Hungary	65 per cent.
East Galicia	77 „
Croatia and Slavonia	81·6 „
Military Frontier	83 „
Moravia	88 „
Lower Austria	92 „
West Galicia	94 „
Bukowina and Styria	100 „

It should be added, that the number attacked in the last two provinces was small.

III.

GENERAL CHARACTERISTICS OF THE DISEASE AS ASCERTAINED BY EXPERIENCE.

Our present experience then, our past experience, and the experience of foreign countries, coincide so far as they respectively go; they identify the English Cattle Plague of 1865, the murrain of 1745, and the *Rinderpest* of eastern Europe, as the same disease, and they yield some clear and well ascertained results, which may be briefly stated as follows :

The Cattle Plague is, in the language of medicine, a specific disease, belonging to the class of contagious fevers. The contagious matter is subtle, volatile, prolific, in an unexampled degree. It is conveyed in a most virulent form in the excretions from the diseased animal. Any particle of those excretions may serve as a vehicle for it. We know not the limit of time within which it disengages itself from them, nor to what distance it may not be diffused. It may travel, we know, in the hide, horns, hoofs, and intestines of the dead animal; the offal, therefore, is highly dangerous. It lurks undeveloped in the system for a period about which some difference of opinion exists, which certainly is not less than five days, usually is seven or eight, but appears to be more prolonged in some cases. Towards the end of this period of incubation, but at what precise point we do not know, it becomes capable of diffusing itself by contagion. A diseased animal may therefore be infectious before it shows any signs of disease, or at all events before the malady betrays itself to any but a very close and very skilful observer. The proportion of cases in which it is fatal is extraordinarily large. No specific has been discovered which neutralizes or expels the poison: judicious treatment may enable nature to resist till the virus has spent itself; injudicious treatment may have a contrary effect; but that is all. The practical conclusion, therefore, at which foreign physicians and foreign governments have arrived,—the conclusion that it is better always to kill a diseased animal, or a few diseased animals, where by so doing you can kill an isolated germ of disease, instead of suffering that germ to linger and fructify whilst you are attempting a cure, for the precarious prospect of an insignificant saving,—is justified by reason; it is also directly justified by experience, which shows that, whilst the Plague propagated from a single germ speedily becomes unmanageable, spreads from herd to herd, from province to province, and from country to country, multiplies in a continually increasing ratio, and exhausts itself only after ruinous havoc and a long course of time, it may be effectually eradicated by prompt and unsparing measures. The experience of Prussia is especially valuable in this respect. The plague has often appeared, says Professor Gerlach, in the provinces bordering on the Russian Empire, in East Prussia, Posen, and Silesia, but it has never, since 1815, penetrated eastwards, even so far as Brandenburg. Lastly, we must add, it has not been found to give way before cold weather or rain. The reverse seems to be the case. It is worse, Professor Gerlach informs us, "in cold and wet weather, and better in warm and dry "weather." "It spreads," says Mr. Ernes, "as fast in a cold as in a hot season." The murrain of 1745 broke out here in early spring, the temperature of the preceding year having been low; and it is stated to have raged most violently during the winters, and to have diminished in intensity with the advance of summer.

IMMEDIATE OBJECTS OF THE INQUIRY.

These conclusions, which are all that for our present purpose it is necessary to state, are far, of course, from exhausting all that is known upon the subject. Beyond what is known, however, there is a large field of inquiry which may be usefully explored. To observe carefully the premonitory and progressive symptoms of the disease under various conditions,—to determine precisely the period of incubation, the effect of remedial and of preventive agencies, (including under the latter head disinfectants, therapeutical measures, and inoculation,)—to ascertain within what range, and under what modifications, the poison may be communicated from a diseased cow to other animals of the same or different species,—these are branches of investigation practically important, but which will take time. With a view to the thorough examination of them, we have obtained the assistance of men eminent in various departments of science, and we hope to be able to report on them hereafter. But we have now to deal with more pressing questions. Are the measures hitherto adopted to stifle the Plague at home, and stop its entrance from abroad, effectual for the purpose? If not, what other measures are likely to be effectual? To these questions, having early satisfied ourselves of the general character of the disease, we at once directed our attention; and the evidence which we have received has been chiefly taken with a view to them.

IV.

PREVENTIVE MEASURES HITHERTO ADOPTED.

The preventive measures hitherto adopted by Your Majesty's Government may be briefly stated.

By an Act of Parliament, passed in 1848, and continued by several subsequent Acts to the present time, the Lords and others of Your Majesty's Privy Council, or any two or more of them, are authorized to make from time to time such Orders and Regulations as to them may seem necessary for the purpose of prohibiting or regulating the removal to or from such parts or places as they may designate in such Orders, of sheep, cattle, horses, swine, or other animals, or of meat, skins, hides, horns, hoofs, or other part of any animals, or of hay, straw, fodder, or other articles likely to propagate infection; and also for the purpose of purifying any yard, stable, outhouse, or other place, or any waggons, carts, carriages, or other vehicles; and also for the purpose of directing how any animals dying in a diseased state, or any animals, parts of animals, or other things seized under the provisions of the Act are to be disposed of; and also for the purpose of causing notices to be given of the appearance of any disorder among sheep, cattle, or other animals, and to make any other Orders or Regulations for the purpose of giving effect to the provisions of the said Act, and again to revoke, alter, or vary any such Orders or Regulations; and it is enacted that all provisions for any of the purposes aforesaid in any such Orders contained shall have the like force and effect as if the same had been inserted in the Act; and that all persons offending against the Act shall for each and every offence forfeit and pay any sum not exceeding twenty pounds, or such smaller sum as the Council may in any case by such Order direct.

ACT 11 & 12 VICT. C. 107.

ORDERS IN COUNCIL.

Under the powers conferred by this Act, several Orders in Council have been issued, dated respectively the 24th July (fourteen days after the first notice of the outbreak was given by Professor Simonds to the Privy Council Office), the 11th, 18th, and 26th of August 1865, the substance of which was afterwards embodied in a Consolidated Order, dated the 22d September 1865. This Consolidated Order contains the regulations now in force relating to England, Wales, and Scotland. Some further Orders have been made prohibiting the importation of horned cattle and sheep, and regulating the importation of hides, from Great Britain into Ireland, and likewise prohibiting importation into the island and barony of Lewis.

(*a.*) Under these Orders inspectors have been appointed by the Clerk of the Council for the Metropolitan Police District; as to all the rest of Great Britain, the appointment of inspectors is discretionary in England with the Justices of each Petty Sessional Division, in Scotland with the County Justices in Sessions; within municipal boroughs the power is vested in the Mayor or Provost. The discretion, however, may only be exercised where the local authorities are satisfied of the existence of the disease in, or have reason to apprehend its approach to (this was added on the 26th August), the district over which their jurisdiction extends.

(*b.*) Every inspector is empowered to enter and inspect all premises within his district in which any animal (this word is defined as including neat-cattle, sheep, goats, and swine) may be found, to seize, slaughter, and bury animals diseased, and to disinfect the premises, and to order the separation of animals suspected of being diseased.

(*c.*) Owners of diseased stock are forbidden, absolutely, to send to market or expose for sale, to send by highway, railway, or coasting vessel, or, lastly, to turn out on common or unenclosed land any diseased animal: if within an inspector's district, they are also forbidden, without the inspector's leave, to remove from their premises any animal which is diseased or has been in the same shed or herd, or in contact, with a diseased animal, or to place any diseased animal in any field or pasture where, in the inspector's judgment, it would be likely to propagate the disorder.

(*d.*) The local authorities may, by published notice, exclude all animals, or any specified description of them, from any fair or market within their jurisdiction; and no animal is to be sent to the Metropolitan Cattle Market, so long as the Plague exists within the Metropolitan Police District, "except for the purpose of being there sold for immediate "slaughtering, and every such animal, as soon as sold, shall be marked for slaughter in "the same manner in which cattle are ordinarily marked for slaughter in the Metropolitan "Cattle Market." The two latter provisions date from the 22d September.

Inspectors have been appointed under these orders in a large number of districts. Cattle landed at the port of London or at any of the outports are inspected on landing by inspectors appointed by the Board of Customs, who are now veterinary surgeons, except in a very few cases where no veterinary surgeon can be procured.

ORDERS IN COUNCIL NOT EFFECTUAL.

These Orders have not arrested the march of the Plague, nor can we persuade ourselves that they will materially serve to arrest it, now that it has spread so widely.

1. INSPECTION.

Inspection is the instrument on which the chief reliance is placed. But it is not enough to clothe an inspector with the most ample powers as to diseased cattle, if he cannot certainly know whether a beast is diseased or not. During the period of incubation, as the evidence shows, even a skilful practitioner may be at fault. Nor are we by any means sure that in all the infected districts a sufficient number of competent persons have been found, skilled in the diseases of cattle. The demand has been sudden; we have reason to doubt whether it has called forth an adequate supply. At any rate, many cases have been brought to our notice, in which tradesmen or others without professional qualification have been charged with this office. It must be added that an inspector, set to fight single-handed in his own district against this insidious enemy, with a private practice, and among farmers and butchers to whom he looks for employment, has a hard task to perform, and is likely to find their motives and opportunities for concealing the disease more than a match for his means of detecting it.

2. METROPOLITAN MARKET.

An important step was taken by prohibiting stock from being sent to the Metropolitan Market, except for immediate slaughter. But how is this prohibition enforced? The beast, if sold, is marked by clipping the hairs of his tail, and this is understood to mean that he is marked for the butcher. But such a mark is sure to lose its significance as soon as the regulation becomes notorious; and, significant or not, there is nothing in it to prevent him from being carried into the country, turned out to graze, or re-sold, while unsold animals are not marked at all. Cases of this kind, where the animals carried infection with them, have been brought to our notice. In fact, of all the cattle which are sent from the country into London, about one-third, after having stood in the market, are distributed again from London over the country.

POWER TO CLOSE COUNTRY MARKETS.

The discretionary power given to local authorities of closing wholly or partially fairs and markets is still more important, provided it be exercised generally, promptly, and firmly. But, in the first place, such a power is not proper to be entrusted to Mayors of Boroughs and Justices of Petty Sessional Divisions. Wider interests are concerned than these little circles enclose. The Mayor of a town, to which its market brings large and regular profits, is not the fittest judge of the expediency of closing that market before it becomes a source of infection to the surrounding rural district. All Justices are not equally firm, equally ready to do an unpopular thing, equally convinced of the magnitude of the calamity. A large number of markets and fairs have, it is true, been closed, one by one, against lean or store cattle; the example once set has been gradually followed. But what has been done has not been done uniformly. In some places all fairs and markets for both store and butcher's stock have been stopped; in others those for store stock only. The periods of stoppage also have been very various. Here, however, uniform action is everything. Restraints on the ordinary course of business and traffic must be of brief continuance if they are to be strictly enforced; they must be sharp and sweeping if they are to be brief. What is necessary to be done should be done at the same time, wherever it is necessary, or it might almost as well not be done at all. In the second place, the prohibition is easily evaded, and does not go far enough for even its limited object. It is evaded (this also has been repeatedly urged on us) by auctions and other public but unauthorized sales, conducted without even those imperfect checks and safeguards which

exist at a market or fair.* Small jobbers too, we are informed, are beginning to roam the country with droves, out of which they supply customers who are not nice as to what they buy. It would be difficult to invent means better adapted to sow infection broadcast.

OTHER MEASURES REQUIRED.

We are convinced then that other measures are required. We proceed to consider what those other measures should be. In doing so we shall endeavour to point out clearly the general course which we think should be pursued, without entering into details, which more properly belong to Your Majesty's Government.

V.

We are perfectly sensible that this is a question of extreme difficulty. The difficulty lies in the magnitude of the sacrifices we have to call for, the inadequate notion which prevails of the extent of the evil to be subdued, the facilities for dishonest evasion and the risks from inadvertence which spring up with every attempt to mitigate those sacrifices. For it must be observed that we have not merely to guard against criminal or unscrupulous acts: nothing is easier than for a man, without being guilty of so much as gross negligence, to become the means of spreading infection over a whole county.

SYSTEM OF CORDONS.

Let us first say a word about the system employed with so much success in Prussia; we mean the system of *Cordons*, by which infected places are isolated, and the disease either suffered to exhaust itself or stamped out by indiscriminate slaughter. Nothing can be more efficacious where the disease is confined to a very few points; but in order to be efficacious the isolation must be complete and must be soon over, and slaughter (as the Germans themselves hold) is merely wasteful where the number of animals is large. When the disease has widely diffused itself, and disappears at one point only to appear at another, the difficulties of isolation become greater, and the chances of its being efficacious less. We need hardly add that in countries accustomed to a strict half-military police and the constant presence of soldiery, where men and cattle are lodged in close-packed villages encircled by tracts of open ground, and where the system itself is well known and the necessity for it felt, it finds facilities which would be wanting among our lanes and scattered homesteads, with a people to whom it was novel and who are unused to restraints and jealous of interference. These considerations are by no means conclusive against the application of it, with some modifications, to England, far less against resorting to it in Ireland, but they warn us against expecting too much from it, or relying on it alone.

ONLY COMPLETE REMEDY TO STOP CIRCULATION.

Against a disease which is highly contagious, undiscoverable at a certain stage, and too widely diffused for an army of inspectors to cope with it, there is clearly but one remedy which would be certainly and absolutely effectual. That remedy is, to prohibit everywhere for a limited time any movement of cattle from one place to another. Enforce this, and, within a time which cannot last very long, the disease is at an end. It must stand still, and it must starve for want of nutriment. This great sacrifice would certainly eradicate the evil; we cannot say so of any sacrifice less than this.

DIFFICULTIES OF THIS.

We are perfectly sensible of the vast train of losses and inconveniences, public and private, which must attend upon such a measure; and the possibility of mitigating them by circumscribing the prohibition in different ways, without rendering it ineffective, is a point to which we have given the most anxious consideration.

DISTINCTION BETWEEN STORE AND FAT STOCK.

The distinction which may be drawn between lean and fat stock, or rather between cattle moved from place to place for the sake of grazing or fattening, and cattle moved with a view to immediate slaughter, here suggests itself at once. In the case of store stock, the risk of propagating infection is on the whole great, and the evil of stopping circulation is less. The farmer who has lean animals to dispose of, and the farmer who has winter food for them to consume, must undoubtedly suffer; and there might be reason to apprehend some diminution in the supply of winter-fed stock for the spring and early summer of next year. But it must be remarked that the fear of infection now deters many farmers—in infected counties, indeed, all but the very needy or the imprudent—from buying at store markets; and that the persons who would lose most by the application of the remedy are also those who are most deeply interested in the matter, and will be the greatest losers if no effectual remedy is found. We have little difficulty, therefore, in arriving at the conclusion, not only that public sales of lean stock should be suspended for a time, but that private sales, over which it is impossible to exercise an effective control, should be stopped likewise.

On the other hand, to interfere with the circulation of fat stock is to interfere directly with the meat market; and to embarrass it is to raise, for a time at least, the price of

* A later Order, issued on the 31st October, prohibits, wherever fairs or markets have been closed by the local authority, the "bringing or sending" of animals to any place for the purpose of exhibition or sale, and the receiving, exhibiting, buying, or selling of animals so brought or sent.

meat. To require that every bullock sold for slaughter shall be slaughtered on the premises of the seller, will undoubtedly in a multitude of cases be inconvenient to both farmer and butcher. There will be difficulties about the actual slaughtering, about the disposal of hides and offal, about transport; and these difficulties appear still more serious when we consider the manner in which the live-meat trade is now carried on, through salesmen and jobbers, and the vast quantities of fat cattle continually in motion to and from London, and from one market to another. A large system of trade and transport will have to be deranged, and many new arrangements to be made, and the cost of effecting these changes on the spur of the moment must fall to a considerable extent on the consumer of meat.

QUESTIONS WHICH WOULD SPRING FROM SUCH A DISTINCTION.

If the distinction be admitted, however, many other questions arise. In the first place, how is it to be enforced? If a privilege is conceded to cattle destined for the butcher, how are we to make sure that a particular animal is really destined for the butcher, or that he will be slaughtered immediately, or slaughtered at all; or that he will not scatter infection on his road? May he be driven home by the nearest country butcher who will buy him, or must he be sent to market? May he go to any market, or only to one where conveniences for slaughtering and for careful inspection are or can be provided? May he, if unsold, be sent home again, or transported from one market to another, or if not, what chance will the seller have, should the market be over-stocked, of making a fair bargain? In considering these points, it must be borne in mind that a butcher has, as some witnesses have remarked to us, facilities which a farmer has not for concealing the presence of the disease; and that he has not those motives for being on his guard against it which the farmer has. A farmer who brings home a diseased animal may probably lose his whole herd. But it is often the butcher's interest to ask no questions.

Answers more or less complete may be furnished on all the points above enumerated, and precautions may be devised with a view to each of them. In general terms it may be stated that such precautions must in the main rest on some or all of the following expedients:—On a modified adoption of the *Cordon* system; on the imposition of new and peculiar legal obligations upon butchers, and probably upon drovers, railway companies, and the authorities in charge of markets; lastly, on a system, more or less extensive, of permits, certificates, or declarations. We ought not, however, to shrink from distinctly saying that no answers can be given which, in our judgment, are perfectly satisfactory, and no precautions invented on which it is possible entirely to rely; and that we believe it to be best for the country, and even for the interests which will suffer most in the first instance, that the prohibition against the circulation of cattle should be maintained in its integrity.

REASONS FOR GENERAL PROHIBITION.

We have stated frankly the difficulties and sacrifices for which the country must be prepared, should this proposition be carried into effect. Of these difficulties the one which will probably be felt most strongly relates to the supply of food to the great towns. Fears have been expressed that to close the Metropolitan Market, for instance, against the influx of cattle from the country, would create a famine. We have already seen that the attempt to restrict the markets of London and Westminster during the Plague which raged here in the reign of George II. was given up on account of the clamour which it created; and it may be argued that the same thing would happen now. Circumstances, however, have widely changed. In the days of George II., meat could only be transported to London alive; even the roads along which the cattle travelled were what we should now think few and bad; there was little importation from abroad, and some difficulty must have been often found in supplying the wants of the metropolis by the ordinary means of communication. Now, every place where fat cattle are fed in large numbers is approached by railways, which can transport dead as well as live meat; and it seems no unreasonable demand to require that, for the sake of averting a calamity of almost incalculable magnitude, London should be content to be supplied with dead meat from the provinces, instead of constituting herself a hotbed of infection by receiving twice a week great throngs of living cattle. This change is indeed in itself economical and advantageous, and appears to be gradually taking place as a natural consequence of the extension of the railway system. There is obviously an immense waste of labour in bringing the live animal to London in order that certain portions of its carcase may be consumed as human food; dead meat is more easily carried than the living creature, and it seems quite as reasonable to carry the butcher to the ox as to bring the ox to the butcher. We are informed that from Aberdeen alone upwards of 1000 carcases are sent up weekly to the English metropolis during eight months of the year, and 300 or 400 during the remaining four months, and that special dead-meat trains leave Aberdeen on this errand five days in the week. Nor is it to be forgotten that London is at the

present moment fed in a great measure with foreign cattle. From the 16th September to the 18th October last, both inclusive, the number of English beasts in the market was but 14,645 to 20,185 foreign. It must further be observed—and this is the most important point—that a general prohibition is capable of being thoroughly enforced. The mere presence of a beast on any highway will be sufficient to prove the infraction of the rule. Any plan which, while laying down the general prohibition, admits exceptions in favour of cattle removed to particular places or for particular purposes, must rest upon the ascertainment of facts more or less complicated, to be proved by certificates from local authorities, upon the accuracy of which, experience warns us, little reliance can be placed. The liberty to remove cattle for particular purposes is sure to be extended and abused for other purposes. A man has only to profess an intention in accordance with the law in order, by a little dexterity, to obtain under such a system the utmost facility for violating the law. It will be a long time before the rules are understood, and the period in which they are violated through ignorance will be succeeded by the period in which they are evaded by design. England is probably the worst country in the world for the working of a system of certificates, permits, licences, and passports; and the temptation to violate the rules will be very great, for the thought that naturally occurs to every one whose herd is attacked is to conceal the existence of the disease until he has got rid of those animals which do not yet show symptoms of its presence. To the objection, true as far as it goes, that the embarrassment thus thrown in the way of trade will probably tend to raise the price of meat, it may be answered, first, that such a rise in the price of meat will afford, at the expense of the community, the means of reimbursing the trade for the sacrifices it has made for the common benefit; and, secondly, that the immense destruction of cattle which such a measure is alone calculated to prevent is likely to raise the price of meat to a higher point, and for a longer time, than a regulation which really does little more than change the place of slaughter from large towns to country districts and places of importation. In the period from 1745 to 1757, almost every measure, short of the one which we are considering, was tried in vain. The disease at first advanced slowly, but it lasted 12 years, and then died out, apparently for want of animals susceptible of its influence, although the difficulty of communication from one part of England to another offered at that time the fairest chance for the success of palliative measures. England has now to contend with the Plague under disadvantages never experienced by any other country. The density of her population, the large quantity of her horned stock, and, above all, the enormous facility of communication by railroad, make her peculiarly liable to the ravages of a contagious disorder, and render the prospect of eradicating it within any reasonable time, either by slaughter or by curative and disinfecting measures, almost hopeless.

Recommendations.

1. *Suspension of Cattle Traffic in Great Britain.*

For the reasons stated above we feel ourselves compelled to recommend to Your Majesty that such measures shall be taken as may be requisite to invest, with as little delay as possible, some high officer of Your Majesty's Government with the power of suspending for a limited time the movement of cattle from one place in Great Britain to another, for extending or shortening such period, and for renewing the prohibition as often as circumstances may render necessary.

1*a*. *Suggested Regulations as to Cattle Traffic, should Recommendation* 1. *not be adopted.*

We believe that this measure offers, as we have already said, the only certain means of eradicating the disease, and we conceive that the end amply justifies us in proposing to the nation so great a present sacrifice. In submitting this, however, as our First Recommendation to Your Majesty, we are well aware that it is likely to excite much opposition; that the difficulties to which we have adverted may to some appear insurmountable; and that to those who do not regard the Cattle Plague in so serious a light as we do, the remedy may seem worse than the evil. This view may possibly be shared by Your Majesty's Ministers; we think it right, therefore, to go further, and to indicate the measures which might, in our opinion, be advantageously adopted, should an absolute suspension of the movement of cattle in Great Britain not be enforced.

a. For a period to be fixed, and which might, if necessary, be extended, no lean or store stock should be permitted to be sold at any fair or market, and sales of such stock by auction or advertisement, or in any other manner whatever, should be prohibited.

b. Cattle might be moved for immediate slaughter to a market or to a slaughter-house licensed for use, but only under a license for transit granted by the magistrates in Petty Sessions. The license for transit should certify to the healthiness of the district from which the cattle come. With this exception, and except in the case of cattle driven from one part of the same farm to another, the transit of cattle over any public road (including railways), or in any coasting vessel, should be absolutely prohibited.

c. Precautions should be taken that every animal sold for butcher's meat be slaughtered within a short and fixed period. It may be convenient for this purpose that no slaughter-house should be used without a license from the local authorities, and no such license given except on the butcher's undertaking to have all cattle which may be sold or consigned to him driven direct to the slaughter-house or premises attached to it, from whence they are not to be moved alive. Cattle sold at a fair or market should not be allowed to leave the precincts of the borough or other place where the fair or market is held (in the case of London, the Metropolitan Police District) alive. To ensure this object, it might be required that cattle entering a fair or market should be branded or marked on entrance, and cattle sold elsewhere to a butcher similarly marked at the time of sale, and that it should be penal for any one but a butcher to have a marked animal in his possession. If any regulation of this kind is adopted, it would be advisable that in every place where a public market is held, lairs should be provided in which unsold animals could remain from one market day to another.

d. It would be desirable to draw some more distinct line between infected and uninfected districts than is at present traced by the Orders in Council. For this purpose, whenever a case of infection is discovered, or is known to have existed within a certain period before the time when these measures may come into operation, the district should be "proclaimed" as infected in the Gazette and the county papers. The egress of live cattle from a proclaimed district should be strictly prohibited, but cattle slaughtered within it and certified by the district inspector to be fit for food might be sent out of it, under proper safeguards for disinfection. Provision should be made for enabling districts which had been proclaimed to be publicly set free, on proof being furnished that all risk from infection was at an end.

This latter proposal would, if adopted, strengthen the inducements of the inhabitants of infected districts to rid themselves of the disorder, and those of their neighbours to watch vigilantly against its approach.

2. *Powers of Inspectors.*

We are of opinion that the power to seize and slaughter vested in inspectors by the Consolidated Order may properly be withdrawn; or, that, if retained, it should be exercised only in cases where the inspector's directions as to the separation of sound from diseased stock, &c., or any general preventive or sanitary regulations issued by the Government, are not complied with. This power is right and useful when the disease has appeared only at isolated spots and attacked a few animals; the public benefit is then very great, and the private sacrifice small; but in proportion as it extends, the hope of thus arresting its march diminishes, the inevitable waste increases, and the sense of hardship tends to become insupportable. In principle, a system of compulsory slaughter should be complemented by a system of compensation, and the objections to promising compensation to individuals out of the public treasury on an extensive scale appear to us insurmountable.

3. *Foreign Cattle.*

No reference has hitherto been made to cattle imported from abroad. Should our first recommendation be entertained, and an absolute embargo placed on all traffic in cattle within Great Britain, we think that imported cattle should be slaughtered at the ports of landing. We are further of opinion that cattle should be allowed to land at certain ports only, where proper facilities can be afforded for inspection and transport. In the other alternative, it will be sufficient to say that foreign cattle, if passed by the Customs' inspectors, and not coming from an infected district, may be sent by railway to any market in Great Britain, but shall be then subject to the same regulations as British cattle.

4. *Uninclosed Lands.*

During the period of prohibition, whether absolute or limited, no cattle should be allowed to be turned on common or uninclosed land.

5. *Periodical Returns.*

It is highly desirable that steps should be taken for obtaining periodical returns of the horned cattle and sheep within the area of every parish of Great Britain, and of their sanitary condition with especial reference to the present disease.

6. *Ireland.*

Before this Report is concluded some reference should be made to the peculiar circumstances of Ireland. The disease not having as yet broken out in that country, there is no necessity for the measures which have been recommended for Great Britain. It is still possible, by the adoption of suitable precautions, to avert the calamity from Ireland altogether. The importation of cattle into that country has already been prohibited for some weeks past. Considering, however, the destructive character of the disease, it will not be judicious to rely upon that precaution alone for escaping it. The evidence which has been laid before us leaves little doubt that it can be conveyed by persons who have been in contact with infected animals, as well as by the animals themselves. In case it should, by any accident, be carried over, the Government should be in readiness to eradicate it from any spot in which it may appear; and unless preparations are made for doing so before the plague shows itself, the authorities will hardly be in a condition to act with the necessary speed and vigour when the emergency arises. In Prussia, upon whose eastern frontier the disease frequently appears, a system of precautions has been adopted for stopping its further progress, which have hitherto met with invariable success. It would probably not be difficult to make provision for the application of similar measures to Ireland, and so to secure to it a permanent immunity from the calamity under which Great Britain is at present suffering. But the extreme rapidity with which the disease spreads makes it important that all arrangements for stamping it out, in case of its possible appearance, should be made without delay.

We append to this Report a short series of practical suggestions, drawn up by those members of the Commission who are professionally qualified to deal with sanitary subjects, and which may be useful at the present time to owners of cattle.

(Signed) ROBERT LOWE.
LYON PLAYFAIR.
RICHARD QUAIN.
E. A. PARKES.
THOS. WORMALD.
ROBERT CEELY.
CHARLES SPOONER.

31st October 1865.

MOUNTAGUE BERNARD.

SEPARATE REPORT

OF

EARL SPENCER, VISCOUNT CRANBORNE, Mr. READ, AND Dr. BENCE JONES.

We are unable to join the other members of the Commission in recommending the total stoppage of all movement of cattle in Great Britain. It is true, that, if such a measure were practicable, it would be more effectual than any other in extirpating the disease. But we do not believe it to be practicable. It would involve an interference with the course of trade at variance with our national habits; and it would demand sacrifices from large numbers of people, who are removed from the presence of the disease, and who will therefore not see the necessity for so stringent a measure. The sudden transformation of the enormous cattle trade by which the large towns are supplied into a dead meat trade, would involve difficulties and dangers of the most formidable kind. The foreign trade, which at this moment furnishes a considerable proportion of the meat consumed in the large towns, would also be seriously interfered with. The price of meat would, in consequence, rise materially and suddenly.

These difficulties would lead to the evasion of the prohibition. And if it is largely evaded, as we think probable, it will be worse than useless.

We prefer, therefore, the measures of a less stringent character, which are recommended as an alternative in the above Report. They demand no greater sacrifice than will readily be made to arrest the progress of so serious an evil; and therefore, we believe that they are likely to be thoroughly carried out.

In the other recommendations of the Report we heartily concur.

(Signed) SPENCER.
CRANBORNE.
CLARE SEWELL READ.
HENRY BENCE JONES.

We are of opinion, however, that store animals may be permitted to move from the farm of the seller to that of the buyer, provided they have a certificate from a Justice of the Peace acting in the district where the sale takes place, showing that they are free from disease and that they have been located for a certain time on the farm of the seller.

(Signed) SPENCER.
CLARE SEWELL READ.

31st October 1865.

SEPARATE REPORT OF MR. M'CLEAN.

I dissent from the Report on the following grounds:

I consider that the magnitude of the calamity against which it is intended to guard, in no way justifies the interference with the traffic in cattle which the Commissioners in their Report recommend, and that the evils which would arise to the community from even a limited prohibition of the movement, or of the importation of Foreign Cattle, would far exceed the losses which may arise from the prevailing disorder.

By the last return issued by the Veterinary Department of the Privy Council Office,—which, as regards the number of animals which have died of the Cattle Plague, is correct, and although not strictly accurate in other respects may be considered fairly to represent the progress and present extent of the ravages of the disease,—it appears that up to the 21st of October 1865, a period of rather more than four months from the time when the disease first appeared in Islington, 14,083 animals had been attacked, that of these 6,711 had died, 5,119 had been slaughtered, 707 had recovered, and 1,546 remained under treatment.

The estimated number of horned cattle in Great Britain is about seven millions, so that less than 1 per 1,000 of such cattle have died of the disease in four months, or about one per day for every 116,000 head.

During the same period of four months, sound and healthy cattle of the average value of (say) 15*l.* 15*s.* per head, have been imported from foreign countries at the average rate of 1,000 per day, so that by the operation of the present system, involving careful inspection at the ports of landing, the gain to the country has been 16·6 sound cattle for each one that has died of the disease.

The growing necessities of the community in the matter of animal food, and the comparatively trifling extent of the injury hitherto inflicted by the disease, do not justify any exceptional legislation or any systematic interference by Government with the trade in cattle, a trade which, taking its position amongst the other great branches of national industry, must be subject to its own peculiar risks and liabilities.

The existing Orders in Council, enforced by the exertions of landowners, farmers, and graziers who have embarked their capital in the trade, appear to be sufficient for its protection; while by insurance or otherwise the parties interested should indemnify themselves against loss without appealing to the community to interfere for the preservation of their property by exceptional legislation.

Since the year 1750 the circumstances of the country and of the cattle trade have entirely changed, and no comparison can fairly be instituted between its state at that period and the present time.

In the year 1750 and the subsequent years of the Cattle Plague, the trade in cattle was one of the principal industries of the country, and any loss sustained by the owners was almost irremediable, as there were then no available means of importing cattle from foreign countries for supplying the people with animal food.

In 1864 circumstances were very different. In that year the computed net value of the articles imported into the United Kingdom was nearly 275,000,000*l.*, of which upwards of 40,000,000*l.* was for alimentary supply, exclusive of spirits, wine, tobacco, and other exciseable articles.

During the same year the computed net value of the articles exported was 212,656,542*l.*, making a total value of 487,520,468*l.*, while the amount of all descriptions of property and profits assessed to the Income Tax was 326,775,501*l.*, about one ninth of which was for occupation of land, and probably not so much as one eighteenth was due to pastoral occupation.

The estimated value of the property which it is proposed to protect by penal laws and quarantine regulations, to be carried out at the expense of the community and to their serious loss, inconvenience, and certain discontent, is about 60,000,000*l.*, or about one eighth of the annual value of the national imports and exports.

The importance of the cattle trade, as compared with the other branches of national industry, is much less in 1864 than it was in the year 1750, while the numbers of the people, their wealth, and means of purchasing animal food, have greatly increased.

The consumption of animal food is not now confined exclusively to the wealthy, but has become the necessary food for the working classes, and the use of it is so general, that so long as the disease can be discovered at a period when the flesh of the animal is perfectly good and fit for human food, it is impossible in this

populous country for the disease to spread to any great extent, as all beasts showing the slightest symptoms of disease would be immediately slaughtered by the owner for his own protection.

As the demand, as shown by our imports of cattle, is greater than the Home supply, there would only be partial loss when lean cattle had to be slaughtered.

The opinions expressed by witnesses of experience on the proposal to supply London exclusively with meat killed and brought from a distance, were not favourable to the plan.

It is further to be considered that any prohibition to the importation of foreign cattle would affect and derange the whole of our commercial relations and means of communication with foreign countries.

It would create distrust at home and abroad as to the safety of investing capital in establishing, by steam boats and otherwise, cheap and regular routes by means of which food is provided for the community.

It would deprive the foreigner of an important exchangeable commodity, in many cases the only one he has to offer, and possibly lead foreign Governments to impose restrictions on the export of any food from their respective countries, that might prove very detrimental to this kingdom.

The farmers of Great Britain cannot produce food enough for the people. Agricultural produce, including cattle, meat, butter, poultry, &c., to the value of more than 40,000,000*l.* sterling, has to be imported yearly from beyond the seas. Any legislation which should interfere with this supply, and the employment of the means which at great expense have been provided for its conveyance to this country, would inflict an incalculable amount of injury, and would occasion great and immediate suffering to the labouring classes, many of whom would be thrown out of work, while the price of provisions would be enhanced, and many of them now able to use animal food would be deprived of it. This would interfere with the value of labour, and with our means of competition with other countries, by increasing the cost of our manufactures.

With these facts and considerations before me, and after carefully considering the nature and extent of the present disorder in cattle, I am of opinion that it does not at present justify any further restriction in the movement or trade of cattle, and that the powers now vested in Her Majesty's Privy Council are sufficient to prevent the spreading of the said disorder, and to avert any future outbreak of it.

(Signed) JOHN ROBINSON M'CLEAN.

31st October 1865.

SUPPLEMENT TO REPORT.

Sanitary Recommendations.*

On the subject of preventive and medical treatment the Commissioners have received, both from this country and from abroad, discouraging but decided evidence that all methods hitherto adopted have been found unsuccessful. Nevertheless, being of opinion that medical science may still be able to discover agents capable of mitigating the virulence of the malady, the Commissioners have drawn up a scheme of investigation into the nature of the disease, and have entrusted different enquiries to scientific men of great skill and ability, who will make reports on the subjects entrusted to them at the earliest possible moment.

In the meantime a few sanitary suggestions may be offered which are calculated to be useful to farmers and dealers in cattle. These may be divided into the following heads:

I. The general precautions which should be taken by cattle owners to prevent the spread of the disorder.

II. The special precautions required when the Plague is in the neighbourhood.

III. The measures, preventive and remedial, which should be taken when the Plague breaks out in a locality.

IV. Measures for disinfecting sheds and cattle which have been infected.

I. *General precautions to prevent the spread of the disorder.*

1.—As no successful plan of treatment has yet been proposed, the owners of cattle must, in the meantime, rely chiefly upon those hygienic measures which the experience acquired in other diseases show to be important in preventing the spread of contagion, and in diminishing the intensity and area of an attack, when, in spite of such measures, they invade a locality hitherto uninfected. In the case of the Cattle Plague it is certain that no sanitary precautious can prevent the spread of the disease when it is actually introduced; still, from analogy, we may draw the conclusion that some effect may be produced on the rapidity of the spread, or on the virulence of the disease, by placing cattle in the conditions most favourable to health.

2. With this view it is important to secure strict cleanliness, good drainage, efficient ventilation, and to prevent overcrowding in all cattle sheds and cowhouses. No accumulations of litter fouled by the voidings of animals should be permitted in, or even close to, the houses or sheds in which cattle are kept. Chloride of lime, carbolic acid, or the powder containing carbolate of lime and sulphite of lime should be used. The latter is probably the best; it contains a well known disinfecting substance which is formed when sulphur is burned, and also a strongly antiseptic material, kreasote, from coal tar. The sheds themselves should be swept and washed daily, and sprinkled with disinfectants. But such purification of the air of cattle sheds or houses will be insufficient to preserve health if the cattle be overcrowded. Pure air and nourishing diet are of great importance in protecting animals from the attacks of disease. Pure water, derived from sources uncontaminated by drainage from surrounding dungheaps, or from the absorption of vitiated air which hovers around them and in the sheds of cattle, is equally essential.

Every farmer should look to the housing of his cattle in the present emergency, as he would look to the housing of his own family, if cholera or other formidable disease were in his neighbourhood. Thorough cleanliness of the houses, good drainage, freedom from evil smells, nourishing diet with pure air and water, cannot give immunity from the disease, but they may offer obstacles to its propagation.

II.—*Special precautions necessary when the disorder is in the neighbourhood.*

Whenever the Plague is known to be in the neighbourhood, or to be approaching it, the following conditions must be borne in mind:—

1. The natural voidings of a diseased animal, as well as the discharges which come from its mouth, eyes, and nose, during the progress of the disorder, can be carried by men and animals so as to infect sound cattle, and in this way the disease is often

* Suggestions in the sense of many of these recommendations have been already drawn up by Professor Simonds and by Dr. Thudichum for the Privy Council, and have been circulated.

propagated. A farmer should therefore at once give orders that none of his own labourers should go near infected beasts, and that none of the labourers working on the farm where there are diseased cattle should approach his stock. Even when veterinary surgeons visit cattle affected with the Plague, they should, if they have been with diseased beasts, first thoroughly cleanse their clothes, wash their hands with a solution of chloride of lime, and rub the soles of their shoes with disinfecting powder.

2. Both sheep and dogs can carry the seeds of the disease, so that they should be carefully looked after, lest, in having access to diseased cattle, they may attach to themselves portions of excrement or discharges, and communicate the contagion to sound cattle. The farmer will do well to recollect that both sheep and goats take the Plague in a virulent form, although they are not, perhaps, quite so susceptible to the influence of the contagion as horned cattle; but even when they do not take the disorder, the wool of the sheep and the hair of goats can long retain the morbific matter, and then transfer it to cattle.

3. The particles of the poison can be drifted by the wind to some distance, experience having shown that a space of considerably more than a hundred yards affords no protection; therefore, if a farmer has the opportunity, he should remove his stock to the furthest possible distance from that of his infected neighbour.

4. If a farmer have reason to think that some of his beasts may have been near infected animals, he should at once wash them over with the solution of disinfecting soap or with a tepid solution of chloride of lime, carefully sponging out the nostrils and mouth so as to remove all portions of discharges which may have been collected.

5. He should vigorously attend to the hygienic measures described in the last section.

III.—*Preventive and remedial recommendations when the Plague has attacked a locality.*

1. Should, unfortunately, the Plague reach the farm or cowshed, it will be the cattle owner's duty to separate without delay the diseased from the sound stock. At once, and before any symptoms of the malady have appeared in the animals which may have been in contact with the diseased beast, he should place them in roomy, well cleansed and dried, well aired and disinfected sheds, having previously washed their bodies with water containing disinfecting soap, or with a tepid solution of chloride of lime; he will thus place them in the best condition to resist the further spread of the disease. But if he do not possess the necessary accommodation for the removal of the healthy animals, he ought, after separating the diseased beast, to make a thorough disinfection of the house or shed, in the manner to be described afterwards, before he permits the sound stock to remain in it.

2. The sick beast, if allowed to remain alive, should be well rubbed down and thoroughly cleansed, be kept in a warm but well-ventilated and clean shed, and be covered with a clean horse-rug. The animal will thus be put in a favourable condition to receive such curative treatment as the veterinary surgeon or farmer may consider it expedient to employ.

3. Having failed to obtain any assurance of the existence of effective curative methods, the Commissioners only venture for the present to indicate some general suggestions as to diet and treatment, which may be useful to farmers.

(*a.*) *Kind of food.*—One of the early symptoms of the disease is that the appetite fails and rumination ceases. When a dissection is made of an animal that has died of the Plague, the stomachs are usually found to contain from one hundred to two hundred pounds of undigested food. This mass of matter interferes with the functions of nutrition in the case of new food, and, further, hinders the action of medicine which may be administered, by greatly retarding its absorption. As soon, therefore, as the beast shows the early symptoms of the disease, its ordinary food should be changed; and, as rumination has stopped, the dry food should be replaced by warm liquid stimulating mashes given in moderate quantity.

(*b.*) *Warmth of the air.*—It is stated that the temperature of the air of the stall should be kept warm; probably not lower than 60° Fahr.

(*c.*) *Warmth to the skin.*—It is desirable to keep the skin of the animal as warm as possible, and if it can be done, to promote perspiration. Without expressing any decided opinion as to the exact efficacy of steam or hot-air baths, we yet believe the evidence is sufficient to warrant a fair trial of these measures.

(*d.*) It is important to lose no time in beginning the treatment of the complaint with salines or diaphoretics, or even stimulants, according to the judgment of the veterinary surgeon as to the state of the disease. Every hour that is lost lessens the chance of a successful result. After cattle have been exposed to infection, some veterinary surgeons

consider it useful to give saline and febrifuge medicines at once, even though it is not certain the animal has taken the disease.

(*e.*) When diarrhœa occurs, there seems little doubt that it should be controlled, and not encouraged.

(*f.*) The animal must be supported as much as possible by very nutritious food.

(*g.*) Milking cows should be regularly milked as long as any milk can be got. The milk, of course, should not be used as food.

The general diffusion of the disorder through the system leaves little hope that any local treatment is likely to prove effective.

When the animal shows signs of convalescence, it should only be very gradually restored to the dry food requiring rumination. It may be treated with moderate stimulants and tonics, among which bark and iron are considered to be the most efficacious.

IV. *Measures for disinfecting infected sheds and cattle.*

1. When animals attacked with the Plague have become convalescent, they ought to be kept apart from sound beasts for three weeks, and even then not be permitted to associate with them till they have been washed and disinfected as described previously.

2. During all the time that animals suffer from the disease, the litter fouled by them, with the dung and discharge on it, should be burned, and not be allowed to mix with other manure. It contains the poison in a concentrated form, and it is questionable whether it can be disinfected efficiently.

3. The sheds in which the diseased animals have been must be thoroughly purified and disinfected. The roof and walls should be washed with lime. The floor and woodwork, after being thoroughly washed with water containing washing soda, should be again washed all over with a solution of chloride of lime, containing 1lb. to a pailfull.

4. The hides and horns of animals which have died of the disease ought to be buried with the animal, according to the Orders in Council. But the hides and horns of those which have been killed to escape the spread of the infection must be dipped in, or thoroughly mopped all over, and, in the case of the hides, on both sides, with water containing 4 lbs. of chloride of lime to three pailfulls of water. Unless this be done with care a most fertile source of contagion will be preserved.

5. The attendants upon diseased beasts should not be allowed to go near the sound animals in the same farm.

6. Every one who has had the Plague in his premises should feel the responsibility which rests upon him to destroy, by careful cleansing and disinfection, every trace of the disorder which may be left on his pastures or stalls, or on his cattle, their horns, hides, manure, and litter. Under favorable circumstances for its preservation, the contagious poison has been kept, with all its virulence unimpaired, for many months. Unless, therefore, each person uses his utmost effort to extinguish the seeds of the Plague which lurk about his farm, they may become a centre of contagion, which will again spread it abroad through the country, and render unavailing the sacrifice necessary for the speedy suppression of this terrible scourge.

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MINUTES OF EVIDENCE

TAKEN BEFORE

THE CATTLE PLAGUE COMMISSIONERS.

Monday, 9th October 1865.

PRESENT :

Earl Spencer.	Dr. Parkes.
Viscount Cranborne.	Mr. M'Clean.
Mr. Lowe.	Mr. Wormald.
Dr Lyon Playfair.	Mr. Ceely.
Mr. Read.	Professor Spooner.
Dr. Quain.	

EARL SPENCER IN THE CHAIR.

Professor James Beart Simonds and Mr. William Ernes examined.

Professor J. B. Simonds and Mr. W. Ernes.

9 Oct. 1865.

1. (*Chairman.*) (*To Professor Simonds.*) You are a member of the Veterinary College of London ?—Yes.

2. Have you been employed by the Government with regard to the cattle disease ?—I have.

3. Have you had the means of studying the disease on some previous occasions ?—I have had an opportunity of studying the disease in Galicia, which now prevails among cattle in this country.

4. Will you state to the Commission the result of your visit to Galicia ?—Accompanied by Mr. Ernes I, after having inspected the ports of Holland and other places from whence cattle were exported to England, went on to Berlin and from thence to Cracow, before seeing or hearing very much of the disease. When we got to Cracow we had an interview with Count Clam-Martinitz, and received instructions to go on to Lemberg, to investigate the malady.

5. When did you make this visit ?—I think that it was in the year 1857. Perhaps you will allow me to refer to the report which was written on my return, and I shall then be able to ascertain the precise date. We left London for Belgium on the morning of the 9th of April 1857.

6. What was the cause of your going on this expedition ?—It was in consequence of information which had reached the Government through the consuls, particularly from the consul residing in Lübeck, of the existence of the Rinderpest in Mecklenburg, and its steady advance towards the parts from whence we were importing cattle.

7. You were sent by the Government to make a report upon the subject ?—I was sent not expressly by the Government ;—the three national Agricultural Societies of England, Ireland, and Scotland resolved that some person should go out to see the state of things, and they determined upon nominating myself with Mr. Ernes to that position, and we had the protection and assistance of the Government. We had letters of introduction to some of the Consuls from Lord Clarendon, who also wrote to the representatives of the British Government abroad.

8. Will you state what occurred on your journey, and what you saw ?—Would it be the wish of the Commission that I should state what we observed with regard to the countries which we passed through ?

9. Anything relating to the cattle disease.—It will suffice to say that we visited Belgium, Holland, Westphalia, part of Denmark, Schleswig and Holstein, Hanover, Mecklenburg, Prussia, and Silesia, and that we saw nothing of the disease until we arrived in Galicia. We found a considerable amount of disease existing in some of these places, but the disease was the one known in England by the term pleuro-pneumonia. It was this disease which had attracted the attention of the consul at Lübeck, and which led to our going out. When we arrived in Galicia, or rather in Cracow, we had an interview with Count Clam-Martinitz, and received instructions from him to go on to Lemburg.

10. Who was Count Clam-Martinitz ?—He was the representative of the Austrian Government for that portion of Austro-Poland. We had made the acquaintance of Professor Nicklas at Berlin on our way to Cracow, who was professor of the Munich Veterinary School, and who had been sent by the Bavarian government on a similar mission to ourselves. Professor Nicklas had an interview with Count Clam-Martinitz on the day previous to ourselves, and the instructions he received from Count Clam-Martinitz were to go to a place called Sandec, being about 150 English miles south-east from Cracow. We, however, were instructed to go to Lemberg, being about 500 miles in nearly a direct easterly line from Cracow. We thought it strange that we should be instructed to go to Lemberg, and he to Sandec, but there were reasons which afterwards appeared explaining this circumstance, and when we saw Professor Nicklas after the interview with Count Clam-Martinitz, we arranged that he should go on with us to Lemberg, after we had been to Sandec, in the event of such being necessary, We went to Sandec, and within a short distance of that place came up to the disease, and had every opportunity of observing it and studying its pathology.

11. Will you state the kind of cattle which were affected in pastures, and whether they were housed or feeding ?—The first cattle which we saw were some belonging to a farmer and distiller residing in a place called Kamienica ; the animals were at a farm of his, a few miles distant from where he resided. On that farm we saw all the animals he had, which were in quarantine upon the farm ; they were therefore not at pasture. In the sheds also there were four steppe oxen, three of which had recovered and one of

Professor J. B. Simonds and Mr. W. Ernes.

9 Oct. 1865.

which had escaped the malady. The disease was introduced into his farm by his purchasing some cattle at a fair some distance from the place. The animals had taken the disease, which was incubated in their systems at the time. On their arrival some of them were sent on to Kamienica whilst others remained on his farms. The disease declared itself in both lots of cattle, and it quickly spread from the steppe cattle to the others. The whole of the details are given in the Report of our mission.

12. What was the number of the cattle on this gentleman's farm?—If your Lordship has a copy of the Report and will turn to page 50 you will be enabled to follow the statement. I there report that "It was somewhat singular that at Zabrzez we came "upon the identical farm where the malady had first "showed itself in this locality, and saw on the "premises four of the original Steppe oxen by which "it had been brought. Three of these had been the "subjects of the disease, but had recovered, and the "fourth had resisted the contagion throughout, as "was believed, because he had before been affected. "They were tied up to fatten, and had every ap-"pearance of perfect health, having no trace of "disease of any kind about them. Besides these, "there were nine other animals on the farm in "quarantine, consisting of three oxen, a young bull, "and five cows; they also were feeding and looking "well. Twelve days had elapsed since the last "death, and we learned that should no other case "occur, the animals would not be liberated till the "completion of the 21st day from the time of the "last death." Then there were others of his animals which he lost in consequence of removing some cattle from his farm to Kamienica, and then sending them back again; there was an interchange of animals at that time which tended considerably to spread the disease.

13. In that case he lost a very considerable number?—The history of it is this that "Until the present "occasion the villages of Zabrzez and Kamienica, as "well as all the surrounding district, have been "perfectly free from the disease since 1846," a period of 11 years. "The existing outbreak took "place in the month of March, and was due to the "introduction of 10 steppe oxen which had been "purchased at a cattle fair held at Jaczmirz in the "Lemberg division of Galicia. These oxen came with "large droves from Bessarabia, and from three to "four thousand head were brought together at the fair. "Jaczmirz is about 20 German miles from Zabrzez, and "three full days were occupied in driving the animals "to the latter named place. They were brought by "M. Berl Krumholz, farmer and distiller, and arrived "at the farm on the 15th of the same month, and "after remaining a few hours were sent on to "Kamienica, where the distillery is situated. They "were here put with 14 fat oxen, but in consequence "of these arrivals being sold for slaughtering two "days afterwards the steppe cattle were returned "to Zabrzez on the 18th; here they were placed in "a stable by themselves, and stood there until the "20th, when four of them were a second time sent "to Kamienica with ten head of young stock, and on "their arrival were placed with 21 others. On the "following day, the 21st, the six steppe oxen left at "Zabrzez were observed to be trembling, which being "supposed to depend on exposure to cold they were "put into a shed for warmth, in which were 18 other "animals, consisting of some young bulls, cows, and "two calves. On the 22d the four steppe oxen at "Kamienica were likewise noticed to be unwell and "trembling, and the true nature of their illness being "now suspected they were immediately removed from "the other stock, and orders were sent to Zabrzez for "the six to be also taken away and kept by themselves. "As a further security to the stock at Kamienica, "early the next morning the four steppe oxen were "sent back to the farm at Zabrzez. Notwithstanding "this precaution, the disease broke out among the "young cattle on the 30th, and eight of them died on "the first day, and by April 3d, 31 in all were dead. "Besides these animals M. Berl Krumholz had ten "others at Kamienica, and the Commissioners de-"cided upon killing them at once, so that he might "receive something towards his loss. Thus it ap-"pears that the entire number lost by him at "Kamienica was forty-one animals, and had it not "been for the selling of the fourteen fat oxen they "also in all probability would have been sacrificed "to the disease. On the same day that the pest "manifested itself at Kamienica it also broke out at "Zabrzez among the 18 animals with which the "steppe oxen were placed on the 21st. Of the "entire 28 animals located here, including the 10 "Steppe cattle, 13 died, 11 were killed, 3 recovered, "and 1 resisted the infection entirely."

14. Was the origin of that outbreak clearly traced to those cattle from the steppes?—It was clearly traced to those cattle which were purchased at this fair, and brought to his premises by himself; he went to the fair and purchased the cattle, and had them forwarded to his farm; and there had been no disease, as your Lordship will have gathered, in the district for 11 years, that is since March 1846.

15. You examined, I suppose, into the nature of the disease?—We examined into the nature of the disease, not only on his premises, but also in the quarantine station in Kamienica, where we were located.

16. And it was a disease which you had not seen in England before?—It was a disease which we had in England in 1745, and which remained here until 1757.

17. Did your journey continue any further; did you visit the steppes?—We did not go to the steppes of Russia; we did not think it necessary to do so, nor did we, after the satisfactory investigation which we had made, deem it prudent to go on to Lemberg. We thought that we should gain no further information than that we had already obtained.

18. What were the precautions taken against the spread of the disease in that country?—The precautions were in principle these: that immediately upon the disease declaring itself on a farm, the person gave information to the local authorities, and directly the place was surrounded by a cordon, which was kept up so long as the disease existed, and until I think 21 days after the ceasing of the malady. The animals were immediately consigned to the quarantine, and communication of every sort and description was cut off. We ourselves, although left free to pass from one village to another, were not permitted to travel along the road with straw in our waggon, but had to sit upon branches of fir trees, which we broke down for the purpose. Even our waggons were kept at some little distance from the farm premises, and we ourselves were only permitted to go upon the premises. The labourers and other persons were prevented by the cordon from leaving the farm.

19. Were any attempts made to cure the disease?—No attempts whatever are made to cure the disease in that country.

20. The animals were left to the course of nature?—Except so far as this, that immediately upon the local authorities knowing of the existence of the disease, they convey the information to the Government, when a Commission is immediately dispatched, and the animals placed under the care of the Commission to deal with as they deem best. They occasionally allow some of the animals to remain alive for a day or two, but when they find that the disease is progressing they slaughter the remainder of them, and bury them with those which had already died of the disease.

21. Then the animals were slaughtered by the order of the Commissioners?—Yes.

22. Were precautions taken with regard to the skins and carcases of these animals?—On the farm in question the skins were allowed to be removed from the animals, and were disinfected under the

superintendence of a proper officer appointed by the Government; but in other parts the general rule which prevails is that they bury the animals with the skins on.

23. Were there any regulations with regard to the inspection of cattle coming into the country?—I think not; there was no general measure with regard to inspection. Immediately, however, upon the pest being known to have come into Austria or Prussia from Russia, a prohibition of animals coming from that country, either into Austria or into Prussia, as the case might be, would be enforced.

24. You are not aware of any inspection at the markets, or where cattle congregated?—None whatever; in fact there are no veterinary surgeons there, and scarcely any competent persons to examine cattle. The Commission consisted of one medical gentleman and a person associated with him who was acquainted with the details of the law.

25. Did you visit any other parts of the continent where you found the disease?—We found no disease excepting in this immediate district. We ascertained its existence in other parts of Galicia; but we did not go to those parts. I may remark that in Kamienica we had every opportunity of observing animals which arrived in the quarantine station day by day; and we also purchased an animal in order that we might the better study the pathology and progress of the disease. Subsequently, however, cases kept occurring day by day, which afforded us therefore ample opportunity of carrying out our mission.

26. You have spoken of the quarantine station; what is that quarantine station?—In the village of Kamienica the animals were very poor, and they were placed in a temporary building which was built with fir trees, with the branches of a tree thrown over the roof, just sufficient to protect the animals from the coldness of the weather, or from the heat of the sun in the middle part of the day. That was the quarantine station into which all the cases were removed as they occurred.

27. From the different farms?—From the different farms.

28. What sort of land was it; was it healthy pasture where these animals were?—Very much of the land may be taken to have been in a state of negligence, so far as cultivation was concerned, being scarcely cultivated at all, for want of implements. It was growing couch grass as large as the stem of an ordinary quill, and in the month of March you could easily have removed this from out of the land quite clean with ordinary tillage. This will give you some idea as to the quality of the land. The land itself unquestionably was good, but it was altogether uncultivated.

29. Would you consider it a healthy pasture for cattle?—It was a healthy district as a rule, but we were in the very poorest part of Galicia. Count Clam-Martinitz had no wish that I, as an Englishman, should be sent there. The greater part of the people had scarcely any money or food or clothes; the poor women could be seen with nothing but a skirt to cover them, washing the couch grass in the mountain stream, to give their cattle, and the animals were in the most starved condition possible. Those, however, belonging to the distillery which I have spoken of were very good animals, and very well kept.

30. (*To Mr. Ernes.*) You are a member of the Veterinary College in Belgium, are you not?—I am not a member of that college, but I have studied in Belgium, and I have studied at Alfort, and at Munich in Bavaria.

31. Have you practised much as a veterinary surgeon?—I am a member of the Royal College of Veterinary Surgeons in England, and I have practised more in England than in any other country. I have practised for 25 years at the present address.

32. Have you anything to add to what Professor Simonds has stated?—Nothing. I was with him all the time; there is nothing to be added or corrected. What he has said is a correct statement of what we then saw.

33. There is nothing more which you then saw which you think valuable as information to the Commission?—No. The clear importation of the disease was from the steppes; that fact had been established. Another fact was that no remedial means were adopted, they considering that it was dangerous to undertake the cure; their expression was that while curing one animal you might infect fifty, and perpetuate the disease.

34. Were there competent people to treat the disease?—There were no means in that district, but in other parts of Austria there are means, but they do not adopt any curative remedies. We ascertained that about 90 per cent. of the cattle generally died; that was the information which we obtained on the spot. A great deal of our information was obtained in Vienna, on our return, however, from Professor Röll, who is a man well versed in veterinary science, and has also had great experience in the Rinderpest or Cattle Plague.

35. Were the means to prevent its spreading generally considered effective?—They are not so effective in Austria because they are not so strictly observed, but in Prussia they are very effective. There, as soon as the plague breaks out in a certain spot, it is surrounded by a military cordon, and they instantly slaughter all the cattle. At Breslau we were informed by Baron Siblûnitz, Governor of Silesia, that there had been one outbreak in that province. It was imported by a carpenter, who surreptitiously passed the frontier cordon from Galicia, where the Rinderpest prevailed at the time. He incautiously mended a manger in his father's cowhouse; a few days after, the malady broke out in the cowhouse. Due notice being given, the place was sequestrated by the cordon, the cattle were killed, and the further spreading of the pest prevented.

36. Are you acquainted with the existence of the disease in any other country besides Prussia and Austria?—I cannot say that I have a very great acquaintance with it, but in 1814, 1815, and 1816 I saw something of the disease. I was then very young, but I saw enough of it to have an acquaintance with it, and to know what it really was, and afterwards, by conversation with different French and Belgian professors who had treated the disease, I got a good deal of information upon the subject, and when we were sent to Galicia that information availed us very much to trace the disease.

37. Is it your opinion that the disease does not break out spontaneously?—It is decidedly my opinion, and I believe that that is confirmed by a great many authorities. Professor Renow, who investigated the disease, clearly establishes that it has never broken out spontaneously in any country except in the steppes, and I believe that we have evidence that it is in the Asiatic part of the steppes where the disease originates, not the European parts, though there it is generally quite as bad or worse than in the Asiatic, but if a line were drawn between the Asiatic and the European steppes, in the opinion of the German and and Russian professors of veterinary science, it would never come further than that. Although it is now affecting, I believe, Hungaria and the Danubian provinces, which for 25 years have not been free from it, it is not indigenous there, but it is imported by the steppe connection. The difficulty is to know whether it resides in the breed of cattle itself or in the geological position of the country, but the opinion is that it is particularly in the marshy part of the steppes; those valleys of the two rivers, the Volga and the Don, seem to be the centre of the disease.

38. There has been no attempt to inspect any of the cattle coming from the Asiatic steppes?—It would be very difficult, because there are not less than perhaps from 8,000,000 to 10,000,000 cattle going from one place to another. When they have devastated their grazing in one part they move further on; it has been stated many years ago that 100,000

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are generally found on the roads coming to Perikop, Bessarabia, and Galicia, at one time, and the disease often breaks out among them while on the road. They might come from the steppes free from the pest, but in travelling bad roads it breaks out among them, and it spreads as they go on.

39. Has your attention been called to the murrain which has existed among the cattle in Egypt; is that the same disease?—The murrain which broke out in Egypt in 1841 was the Rinderpest, and it was clearly traced to cattle bought by the Pacha of Egypt and other rich proprietors in Annatolia and Karamania, in the winter of 1840 and 1841. They were shipped in Adana and Tarsau; but before their embarkation a great number died of an epizootic, which broke out amongst them. Instead of abandoning the rest, they hurried the embarkation: more died on the transit. The remainder arrived at Alexandria in the spring of 1841, were sent hurriedly up the country with a view to stay the malady; but they soon spread the Plague, which lasted until 1845. This was the Rinderpest. There is another disease which affects the cattle coming from the fertile districts of Nubia, of which Egypt draws large supplies of cattle, but its character is dysentery caused by the privation on the roads, but it is not contagious.

40. That is what they suffered from so severely two years ago?—Yes, and Italy suffered two years ago from the same pest, and then it was clearly traced to cattle which had been brought from Austria to Trieste, and from Trieste the plague spread over nearly the whole of the south of Italy.

41. (*Dr. Parkes.*) (*To Professor Simonds.*) With respect to the quarantine in Galicia, you say that 21 days' quarantine was imposed?—Twenty-one days subsequently to the killing of the last animal. The animals are taken possession of as quickly as possible, and they are confined in quarantine for a certain time. We will presume that there are 10 or 12 animals in the quarantine station; deaths occur probably day by day; the Commissioners slaughter the animals which live on, and they keep up the quarantine with all its rigour for 21 days after the slaughtering of the last animal.

42. You are referring to 1857, is that still the case?—Yes.

43. Some of the Russian parties have attempted to shorten the period of quarantine, thinking the 21 days too long. What is your own opinion as to the period of quarantine?—I think that it would be very dangerous indeed to shorten the period of quarantine to 10 days. Mr. Ernes attended at the Congress, held only a month ago at Vienna, and the question was there discussed, and a division took place; some were for 21 days, but the majority were for 10 days, —they did not want to interfere too much with the trade in cattle.

44. I did not quite understand the plague in Southern Italy two years ago to which you alluded to, it was the rinderpest, was it not?—*Mr. Ernes.* Decidedly so.

45. (*Mr. Read.*) (*To Professor Simonds.*) Do the foreign governments grant compensation for the cattle which they have slaughtered?—Yes; speaking generally, they do. In Galicia we witnessed the proceeding with respect to the animals which the Government had determined to kill. The animals were brought out of the quarantine station, and held so that they could not escape, and a jury of three persons with the mayor or burgomaster of the place was summoned to put a value upon them. These persons stood at a considerable distance, just within hearing distance, and they asked those to whom the animals belonged the age of the cattle, what they had cost, and whether they were in milk, and other questions of that kind, to enable them to arrive at a satisfactory conclusion as to their value. When this information was furnished,—the whole matter being taken note of by the Commissioners,—the valuers signed their award, and the animals were immediately slaughtered. I believe that the Government paid in this instance two thirds of the value.

46. Did you discover any difference in the mortality between the fat cattle of the distiller and the lean cattle of the peasants?—We had no opportunity of coming to any conclusion upon a point like that, because the fat cattle belonging to the distiller had been sent away before we arrived; they were only store stock which he then had, with the exception of the four steppe cattle which were being fattened.

47. We will not say fat cattle, but those in good condition and others half starved?—The mortality was quite as great in one instance as in the other.

48. Do you know whether there was any truth in the report that during the Crimean war the rinderpest was introduced into Turkey? — During the Crimean war the disease existed in the Crimea, and it proved very destructive indeed both to the cattle which were brought together for the use of our army, as well as for the use of the French army. There are some particulars in this report upon that point: "It has been said that the French army lost "in Samsoun 8,000 beasts out of 17,500 in the space "of nine months, and that we" (that is, the English section of the united army) "lost during the same "time 4,000 out of 10,000 from the pest."

49. It, I believe, has generally followed in the wake of an invading army?—Yes, particularly the Austrian army and the Russian army.

50. You attribute its progress now more particularly, perhaps, to the ramifications of commerce?—Yes, to commerce, and not to war.

51. (*Mr. Ceely.*) You have stated that the term of quarantine has been 21 days after the death or slaughter of the last animal. Are there any facts to show how long after the convalescence of an animal it is considered safe to let it mingle with others?—I do not think that there are any facts which will show that, but it is a very important subject.

52. The quarantine seems to apply to the death or the destruction of the animal?—Yes.

53. It appears to be a fact of very great moment to ascertain how long the animal retains the infection after the discovery of the disease?—*Mr. Ernes.* It was decided at the Congress of Vienna that a quarantine of 10 days after the recovery of the animal affected, or after any animal being exposed to the infection, would suffice, and the result of that would be to establish a period of 11 days. I urged with Professor Spooner the impropriety of so short a quarantine, but we were outvoted by the Austrians, the Bavarians, and the Russians. They said that it had never been known that an animal had caught or circulated the disease after nine days, that that was the longest period of incubation which had been known.

54. After recovery?—After recovery, or after having been exposed to the infection; they said that incubation was never longer than nine days. That also had reference to an animal which had recovered from the disease. They said that if 10 days were allowed, the owner of the cattle might have them removed from the quarantine, and disposed of them. The recommendation of the Veterinary Congress is 10 days.

55. (*Mr. Wormald.*) (*To Professor Simonds.*) Was there any particular mode of feeding which the farmer adopted at Kamienica?—The animals were fed to a considerable extent upon grains from the distillery; the animals upon the farm were fed from the ordinary farm produce.

56. Were those grains in the same condition as usual?—I am not able to speak upon that point. There was no distilling going on when we were there, for us to observe the condition of the grains.

57. I suppose they were grains which had been kept?—I should presume from what I saw, and from the course adopted in different parts of the Continent, that they were given quite fresh, as is the case in Holland. Distillers' wash and grains are here often

given quite warm; they are pumped into receptacles, and pass on into mangers for the animals to take at once.

58. Did you ascertain whether the disease in its progress took at all the same course geographically?—No; I am of opinion that common causes have no influence whatever over the spread of this disease,—that if the disease entered Prussia for example, through Courland in the very northern part of Prussia, it would just go southward, if animals existed in that direction, or westward if animals existed in that direction,—that it would indeed travel in any direction where it found a facility for spreading according to animals being located in that direction.

59. Then it is your opinion that it is conveyed by contagion?—Decidedly so; that is to say, giving an extended meaning to the term "contagion;" it is not necessary that there should be positive contact of animals.

60. It may be mediate or immediate?—Yes.

61. (*Mr. M'Clean.*) How did you ascertain that the diseased cattle came from Bessarabia?—On the information which we had direct from the person who had purchased them himself.

62. You are aware that the distance is upwards of 300 miles, and that it is a cattle country throughout?—Yes, but we ascertained it from our examination of that person; we had him under examination for some considerable time.

63. The cattle had been driven upwards of 300 miles?—The cattle had been driven something like 300 miles.

64. And through the densest district for cattle in Galicia?—Yes, until they arrived in a district which cannot be termed the densest district of Galicia, where we found them, namely, at Zabrzez.

65. (*Professor Spooner.*) You have stated to the Commission the symptoms which you observed in those animals affected with the disease prior to death; will you state the post-mortem appearances, and what struck you as being remarkable?—The lesions produced by this disease consist essentially of inflammatory action, more or less intense, in the whole of the mucous membranes of the body. If we commence our examination at the mouth, we find that there is desquamation very frequently of the epithelium at the roof of the mouth and also of the tongue. At the fauces there is intense inflammation, with an effusion of lymph, the parts being dotted over with a yellowish white pigment. The rumen is healthy, and also the second stomach; the third stomach is affected with inflammation in patches; this inflammatory action often going on to a degree of intensity as ultimately to end in ulceration. In the fourth stomach there is intense inflammation of the villous membrane in patches, and every now and then you see spots of ulceration. In the duodenum, we also find similar indications of disease as well as in the other small intestines, particularly in patches; we observe now and then a tendency to ulceration, or that there is ulceration of Peyer's glands, but it does not appear to be an essential of the disease in its early stages. In the larger intestines similar lesions are seen to those in the smaller, and more frequently ulceration in the apex of the cœcum. The rectum may or may not be inflamed. In some cases it is greatly inflamed, while in others its mucous membrane is scarcely reddened. Looking to the respiratory system, the larynx, as a rule, is in a diseased condition. The lining membrane of the trachea often appears to be free from inflammatory action, but is covered over with layers of lymph, frequently as thin as a sheet of paper, while in a larger number of instances the trachea and bronchia contain inflammatory products mixed with frothy mucus. The lungs are free from disease, but very often emphysematous. The serous membrane of the chest, as a rule, is likewise free from disease. On the inner part of the heart, and on the left side in particular, petechiæ are present. In one or two instances in Galicia we found ulceration of the mucous membrane and of the gall bladder, and effusions of lymph into the gall ducts. The gall bladder is also very much distended with bile. The generative organs generally speaking are free from disease. The brain gives no indications of disease; but in detaching the brain from the spine we found nearly in every instance in Galicia a larger quantity of fluid than ordinary.

66. You have not seen such lesions as those on any previous occasion in diseases affecting bovine animals in this country?—Nothing at all approaching to it.

67. And those appearances corresponded with the history which you have read of the symptoms generally attendant upon rinderpest?—Precisely so.

68. (*Dr. Playfair.*) How soon were those Russian cattle observed to be diseased after they arrived at the village which you have mentioned?—I think that they were found to be diseased in about four days; they arrived on the farm on the 15th, and they stood there until the 20th.

69. They were not observed to be diseased when they arrived?—No; they were believed to be perfectly healthy.

70. In driving 300 miles through Bessarabia I suppose that it would take about 15 or 20 days?—These animals happened to have come about only 20 German miles from the fair. They were purchased at a fair about 20 miles from the place where they went to.

71. But in coming through Bessarabia, about 300 miles, they must have taken 20 or 30 days to come that distance, supposing they had come direct?—I suppose that they would take something like that time, but we know nothing of the time occupied, nor whether they came direct from the steppes to the fair.

72. But there were no means of transport such as railways to bring them very rapidly?—At that time there were no railways whatever. There is now a railway from Cracow to Lemberg, and animals could come out of Podolia and adjacent countries to Lemberg, be put upon the rail, and come direct to the port of embarkation for England.

73. At that time, in 1857, there was no railway?—In 1857 the railway terminated at a place called Bochnia.

74. How far is that from this village?—About 200 miles.

75. Would cattle travel about 20 miles a day without risk, or is that too much?—Twenty miles I consider quite far enough for animals to travel in one day; they occupied three days on the journey, as nearly as we could make out. If I may be permitted on the next occasion I will bring with me a map which I have of Galicia, on which I have the place marked where the fair was, and also that to which the animals were taken.

76. Taking the least estimate it must have been 15 to 20 days before the cattle communicated that plague from the time at which they came from the steppes?—It is not improbable that they might have received the disease on the journey, or they might have received the disease at the fair.

77. Was the disease in any other part of Galicia at the time?—Yes; there was disease in the neighbourhood of Cracow. When we were at Cracow we saw the cordon marked by pieces of stick being put in the ground, and straw placed on the top of them. The railway passed through the cordon.

78. Then you do not think that this disease was necessarily imported directly from the steppes, but it may have been disease acquired in the country at the time?—I think it is very likely, presuming that the animals had come direct from the steppes, but of which I have no evidence, that they might have brought the disease from the steppes, still it is not at all improbable that they might have received the disease on the journey. The disease exists almost continuously in those districts.

79. Was it clearly ascertained that in this case, which you have specified, the disease came direct from the steppes?—We could not satisfy ourselves further than we did, namely, that steppe cattle had

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been sent to this fair, and that some of them had been bought by the person alluded to, and that in those animals the disease was incubated at the time at which he bought them. That was all that we could ascertain.

80. That it might have arisen from them ?—It did arise on the premises from them.

81. You have stated that you thought 10 days were not sufficient, but that 21 days were sufficient; and it was with reference to that question that I wanted to see whether that period had been enough to prevent the transfer of the disease. It seems that there must have been 15 to 20 days at least, before the animals communicated the disease, if they brought it directly from the steppes ? — My opinion with regard to this disease is that it is not safe to allow any animal coming from an infected district to go with another in less than 21 days.

82. Do you think that with 21 days it would be really safe ?—I would not say that; but not less certainly.

83. But the general experience of the veterinary surgeons in Austria and Prussia is that 21 days is sufficient ?—Yes.

84. (*Mr. Lowe.*) (*To Mr. Ernes.*) You said, I think, that you were familiar with the Rinderpest in 1814 and 1815 ?—In 1814, 1815, 1816, and 1817, we had it.

85. Where ?—In Belgium, Holland, and France; it came in the wake of the Russian and Austrian armies. It first broke out in the eastern part of France, in the wake of the Austrian army, and in the northern provinces of France, Belgium, and Holland, in the wake of the Russian army.

86. Could you trace the origin of that pest ?—We traced it clearly to the introduction of Russian and Austrian cattle.

87. Can you tell us how long this disease has been existing in the steppes ?—It is clearly described as far back as 1,000 years, in the time of Charles the Great, there we have the first clear description of it. We afterwards do not have so good a description of it until 1711. In 1711 it was closely studied by the veterinary surgeons and the medical gentlemen.

(*Professor Simonds.*) In 1514, and also in 1599, beef and veal were forbidden by the Council of Venice to be eaten, in consequence of this disease.

88. Where do you get those statements ?—Particular information relating to this disease is very much scattered, but there is a work written by a Mr. Mills on cattle, which contains a fair history of the malady. I do not think that Mr. Mills was a veterinary surgeon or a medical man; but he has compiled a great deal of useful matter on this and other diseases of cattle.

89. Historically ?—Yes; and so has Mr. Youatt in his book on cattle. There is also a work by Mr. Layard which is especially appropriate on this disease. From these sources and various others I have been able to acquire much information.

90. Is the disease in permanence on the steppes, or does it come and go ?—(*Mr. Ernes.*) It is in permanence on the steppes. They are never free from it. Sometimes it breaks out more and sometimes less, but it is not so fatal to the steppe cattle as to the others; and they sometimes have it in so mild a form that it wants a great deal of knowledge of the disease to perceive it. But whenever cattle come out of the steppes, to the Crimea or Bessarabia, the disease very likely breaks out on the road, and they spread it as they go along. The disease seems to be spontaneous with the steppe cattle, but it has never been known to be spontaneous with any other cattle.

91. Is it your opinion that the journey aggravates the disease ?—There is no doubt about it. One of the professors of Berlin (Spiniola) studied that subject very extensively, and went into the steppes themselves and Bessarabia, where he got all the information, and I quote from his book. There are other works upon the subject.

92. I suppose that you went to Galicia with the exact type of the disease in your mind ?—Yes; we were informed by a professor in the school of Prussia that it was of no use going northward, but that we must go to Silesia, and we were told to go on to Galicia, and were given letters of recommendation to the Governor of Cracow.

(*Professor Simonds.*) Lord Augustus Loftus also gave us an important official communication at Berlin, and we had a distinct statement from Baron Manteuffel that Prussia was then free from the disease.

93. Did the disease which you found in Galicia correspond exactly with the type of the disease which you had in your mind ?—(*Mr. Ernes.*) It corresponded exactly with the notion which we had of it.

94. Was there any variation ?—There were slight variations, sometimes nervous symptoms were not so strong, and at other times the symptoms were stronger than we were aware of. I had not seen the nervous symptoms so strongly marked in the cattle of 1814, 1815, and 1816; but then I was young, and only studying.

95. Substantially it was the same thing ?—Yes.

96. Do the sheep in those countries have the disease ?—Up to the present time we have not found anything among sheep, but Professor Seifman and other professors, one in Bohemia, have observed it in sheep; it has been observed in the sheep and goats of Sicily.

97. (*Viscount Cranborne.*) Had this disease actually broken out at the Jaczmirz fair ?—The cattle as they went left traces of it on the road; there were two or three places where the disease had broken out where these cattle had sojourned.

98. These special cattle ?—Yes.

99. These 18 ?—Yes, these 18 which were bought.

100. The disease broke out after these cattle had stayed there ?—Where they stayed they left the infection.

101. But did you hear of any disease at the fair itself, or in the neighbourhood of the fair ?—At the fair itself there was no disease.

102. What was the nearest point at which the diseases was actually raging at the time of the fair ?—We had no evidence upon that point; but still it was stated by the documents in the hands of Count Clam-Martinitz that it was on the road from the fair.

103. Behind the fair did you know anything of the parts where the rinderpest was raging ?—No; I fancy that the fair was very close to the Russian frontier.

104. How far was the fair from the place where the Rinderpest was indigenous?—(*Professor Simonds.*) Some considerable distance.

105. Have you any evidence to connect these cattle with the districts where this Rinderpest was raging ?—(*Mr. Ernes.*) None, except that they were steppe cattle, which are very distinct from any other cattle; and it is generally admitted by veterinary surgeons and medical man, that the steppe cattle carry the germ of the disease, and that it might break out spontaneously in them.

105*a*. Without any limit of time whatever ?—I am net sure how long it might be carried in the system of the steppe ox; but that he carries the germ, and is subject to spontaneous outbreak of the malady, which has not been the case up to the present time, was confirmed at the recent International Veterinary Congress at Vienna, where I attended with Professor Spooner and others. The opinion is, that the steppe cattle carry the germ of the Rinderpest, that it may break out spontaneously in the steppes and on the road when out of it, and that it frequently does so break out, by which they infect whole districts.

106. Has that been generally known to the Government along the frontier ?—I cannot speak from experience on that point, but that is the general opinion of the professors in Germany and Russia.

107. And you say that this rinderpest is raging every year in the steppes ?—More or less every year.

108. Do these fairs, such as that at Jaczmirz, go on every year ?—The steppe ox when fattened on the

herbage of the steppes is removed from the steppes, and we are informed that 100,000 are conveyed from the steppes through Bessarabia, the Crimea, Galicia, and to the different fairs in these countries.

109. Are no precautions taken at the frontier to prevent those animals which are likely to spread the disease from passing it?—Only when it is known that the Rinderpest prevails in some districts where the cattle came from; then there are quarantines of 21 days. But it was decided by the late congress that a permanent quarantine should be established of 10 days, between Austria and Prussia on the one side, and the Danubian principalites and Russia on the other.

110. According to your opinion 10 days' quarantine is useless?—I am of opinion that it is not sufficient; but those who have more experience than we have say that 10 days is sufficient, and that if it was a longer quarantine it would impede the traffic in cattle.

111. But these particular animals had a 30 days' quarantine from the time when they left the steppes?—They might have had the disease when they were on the other side of the frontier.

112. But I understood you to say that when they were bought they showed no signs of the disease?—That of course was not satisfactorily established; they might have had signs of the disease when they came to the fair.

113. The signs of the disease are not ascertainable by ordinary persons, but only by skilled veterinary surgeons?—By skilled veterinary surgeons who have seen the pest before. Those veterinary surgeons who have never seen the malady would not be able to detect it at first; it might prevail, and it is sometimes too slight, that even a professional man might overlook it.

114. Then it would not be safe to entrust any but skilled persons with the power of killing oxen or cows supposed to be affected with this disease?—That is the opinion of the German and also of the Russian Governments.

115. Were the Commissioners who were sent in 1857 by the Austrian Government persons familiar with the rinderpest?—Yes; decidedly so. In those poor districts the surgeon and veterinary surgeon are combined. At the Vienna Institute every surgeon also studies veterinary science, and in those poor districts the two are combined, and the surgeon in question was one of those persons; he had studied veterinary art at the institute of Vienna, and consequently he was appointed as Commissioner, and he was well acquainted with the disease.

116. You have spoken of the system pursued in Prussia; are all surgeons equally well educated for veterinary purposes in the frontier district of Prussia?—In Prussia the surgeon and veterinary surgeon are distinct; not so in Austria, where the two are often combined. Prussia stands very high. Professor Hertwig is one of the first men in his profession.

117. According to the system in Prussia, as I understand you, whenever the disease is detected in any district the whole of the cattle in that district are slaughtered?—Yes.

118. How large is that district thus condemned?—It might be only a farm or perhaps a whole village that is infected; a cordon is formed round it; nothing is allowed to go, and all the cattle are slaughtered.

119. Is that always done on the authority of a veterinary surgeon?—Yes; it is on the authority of an inspector, and by the authority of the Government, and a certain compensation is made to the proprietors.

120. You stated, I think, that the disease was 1,000 years old; have you any accurate details of symptoms from those early times?—Professor Simonds has perhaps investigated the history more than I have. I do not exactly know what were the symptoms in the time of Charles the Great.

(*Professor Simonds.*) There are no symptoms sufficiently described for us to identify them with this malady.

121. Are the Austrian surgeons of opinion that ten days' quarantine is sufficient?—(*Mr. Ernes.*) They were of that opinion at the Congress; we were out-voted. I and my colleagues were of opinion that ten days' quarantine was not enough. *Professor J. B. Simonds and Mr. W. Ernes.* 9 Oct. 1865.

122. Are the Austrian surgeons also of opinion that the steppe cattle are the only cattle which have the power of conveying this disease for a length of time?—Yes.

123. Is that an opinion in which other scientific men agree?—Different scientific men agree in it.

124. You say that it breaks out on the journey where 100,000 of them are together?—That is generally when it is perceived; but whether it prevails in the steppes there are no means of ascertaining.

125. You also say that it was suspected to have broken out in the Crimea, and in 1814 when large numbers of cattle were massed together?—A large number of cattle were massed together; but, if I am allowed to say so, that is not the cause of it, because I can point to two cases where large quantities of cattle were massed together, not only in the French army but also in the English army. I can refer to the six years' war in Spain; there a large number of cattle were with the English army as well as with the French, and they were all massed together, and the disease never broke out. I can refer also to the African war, in the case of the French under Charles the Tenth, and Louis Phillippe, and I believe under Napoleon the Third, there numbers of cattle were massed together, because they had to send them over from different parts wherever they could get them. I am informed that they stood up to their knees in the mud, and that they were in the most wretched condition, and still the pest never broke out. I should say that diarrhœa and dysentery broke out among them, but never this peculiar pest; and wherever the armies have been, if no Russian or Austrian troops have come to them, the disease has never been known to break out.

126. Is the steppe cattle a different species from the others?—Decidedly; he is a small ox with a large arched back, thin neck, and generally long horns, but sometimes small. He is of a slate or mouse colour, with very long, strong, black hair on the back and under the belly; when seen you cannot forget him.

127. (*Chairman.*) You have stated that you believe that this cattle plague always existed in certain steppes, but not in others. I believe you stated the Asiatic steppes?—That is the opinion of those who have more carefully investigated it. They say that the Asiatic steppes are the locality where it comes from, but it is soon spread over the European steppes, which are hardly ever free from it. It is, however, their opinion that if we could draw a line between the European and the Asiatic steppes we should not have it in Europe at all; they say that it is clearly an Asiatic disease.

128. What are your sources of information?—My sources of information are the German professors. Professor Gerlach, I believe, is still in this country. I believe that he is acquainted with the disease, and that if your Lordship thought it worth while to examine him, he would not have the slightest objection to be examined.

129. Is there any special Report by Commissioners appointed by the Austrian or Russian Government on the disease existing among these cattle?—I think that there are Government documents. I think that the Archives of Vienna would furnish the Commissioners with all the information, if there were time to obtain them.

130. (*Professor Spooner.*) Did I rightly understand you to say that in the event of a number of steppe oxen being taken from the steppes, although perfectly healthy at the time, they may carry with them the germs of the disease, and that the disease may break out in those animals at any period subsequently?—I cannot say how long a time, but I have been informed that it frequently breaks out after the cattle

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have left; but us to the number of days I cannot say whether 20, or at any time they carry the germ of the disease.

131. (*Dr. Playfair.*) Is that consistent with saying at the same time that 10 days' quarantine is quite safe for the steppe cattle?—It is not consistent; and therefore I want a longer quarantine.

132. (*Chairman.*) Would you say any time; would it be safe after 30 days or 40 days?—I do not know whether they would go quite so far as that, I believe that for the steppe ox there ought to be no quarantine at all.

133. (*Viscount Cranborne.*) You think that he should always be slaughtered?—Yes.

134. (*Dr. Playfair.*) Is it not the case that there are above 6,000,000 cattle in the steppes which are reared for the purposes of exportation?—That is so; and I believe that up to this day they kill them for the fat and the skin, and leave the carcase to rot on the steppes; I believe that you would be nearer the mark if you said 8,000,000 or 10,000,000.

135. (*Viscount Cranborne.*) If fairs always exist in Bessarabia, and if this Rinderpest always exists in the steppes, how is it that we have not had the Rinderpest every year?—Because we have not always been in direct communication; but these oxen are now brought to England from the south of Russia, or even from Hungary. Cattle can now be brought here in six or eight days from the south of Russia, consequently we have now what war has formerly done for the rest of Europe. Railways have done it in these days. Cattle have been brought in a few days from the south of Russia to Riga.

136. Are these districts often surrounded by a cordon?—Every time when they have this malady.

137. Is that often?—Very often, I am sorry to say; I think that they have it every three or four years. The Prussians are more free from it because they take greater precautions, but the Austrians are hardly ever free from it. I believe that for 25 years they have had it in Hungary.

138. (*Dr. Playfair.*) Is it not the case that there is an immense exportation every year to almost all parts of Europe, excepting this neighbourhood, from the steppes of Russia?—To Austria and Prussia.

139. And a good many other parts. I have seen a report from Russian Minister giving the names of all the places from which exportation takes place, and it is very extensive?—Exportation has very much increased since 1857.

140. This is from the official report. "In Russia "6,000,000 cattle are raised on the steppes, and are "exported every year throughout Russia, Germany, "Poland, Anatolia, and even into Syria?"—Yes, that is correct.

141. (*Professor Spooner.*) Do you know whether the animals so exported are usually soon slaughtered, or are they kept as stock animals?—I believe that they are very generally slaughtered.

142. (*Dr. Playfair.*) Do they not generally become thin and unfit for slaughter during their long marches?—No; they are fat before they come; that is the advantage of the steppe. The grass is almost as high as the ox himself. He is fattened on those immense prairies, and he is sold as fat; if he loses a little of his flesh on the road that is of no consequence.

143. (*Mr. Read.*) How many miles has he to go?—I cannot tell you; a great distance.

144. (*Professor Spooner.*) But they now avail themselves of the railway.—(*Professor Simonds.*) They must get to Lemberg first.

145. (*Chairman.*) Is the Report of the Congress of Surgeons at Vienna published?—(*Mr. Ernes.*) The minutes are not published. I expect them about the middle of this month. There is a report, but it is not quite finished.

146. (*Dr. Parkes.*) Is there an absolute unanimity of opinion among the German and the Russian veterinary surgeons, that the disease never can arise spontaneously out of the country?—They are unanimous upon the point. There is no difference of opinion as to its being confined to the steppe ox, and that it has never arisen spontaneously in any country out of the steppes. That is the opinion of the Prussian and Austrian veterinary surgeons. It was advanced by Professor Jessen, that if the cattle could be inoculated with this disease before coming out of the steppes we should be free from it altogether. It is a well known fact that an animal never contracts it twice.

147. I thought that Jesson himself had expressed his opinion that it might occur twice?—He has expressed his opinion that it could not. He has practised inoculation on the large stock of the Grand Duchess Helena; but it seems that unfortunately he lost about 90 per cent.

148. (*Mr. Cecly.*) Is Monsieur Gellé still living?—No.

149. He states his opinion that the disease does not always arise from foreign cattle, but that it occurs spontaneously?—I know that he is of that opinion, and several other French authorities are of same opinion; but I believe that it has been proved by Renault, who was well versed in it, that it is not so. Renault's report is in my possession, and if the Commission wish to see it I can forward it at any time in that report; he clearly proves that it is not so.

150. Gellé admits that it is a disputed point?—I believe that he establishes it. Delafont, who wrote very much on it, had never seen the disease himself.

151. (*Mr. Wormald.*) Are there any premonitory symptoms which occur in this disease which are pretty generally observed?—I have not noticed any. I believe that a cow or an ox might be perfectly healthy at night, feed well, and milk well, and that not the slightest disease might be perceivable, and that the next morning it might show decided symptoms of the disease.

152. In what way?—There is a sort of dulness; a hanging of the head, and a coldness of the body, and loss of appetite and of milk,—general debility, and partial tremours. After that, at another stage, there is a running of the eyes and the nose, emphysema, with crepitation. Diarrhœa might set in on the second or third day, and about the fifth day it is generally fatal; but it begins by nervous symptoms, and at times those symptoms are so strong that a cow might be found dead in the morning without having been suspected to be ill at all.

153. Then the first symptoms are not always alike?—They are not always alike. There have been cases where the animals are savage, butting at everything—a sort of delirium. Sometimes there is a shaking of the head to and fro; if you lift it up, it goes down again like a dead weight.

154. (*Chairman.*) (*To Professor Simonds.*) When was the outbreak of the disease in England first brought to your immediate notice?—On the 4th of July, Mr. Priestman, a veterinary surgeon living near to the Metropolitan Cattle Market, and Mr. Nichols, the son of Mrs. Nichols, who has a large dairy at Islington, came to the Veterinary College, bringing with them the stomach and intestines of a cow, they being under the impression that the animal had died from poison. They requested me to inspect the whole of the animals. I did so, and made very strict inquiries at the time as to the manner in which they had been fed and managed, and I satisfied myself before I left the premises that there was no poison in the case. A doubt, perhaps, might have existed in one's mind as to whether anything deleterious had been taken by the cattle through the water, the well having been recently opened, and being then only partially covered. I had some of the water taken, and portions of the viscera of another animal, which I had killed, removed to the college for analysis. I went on with my inquiries into the disease, and in the course of a day or two I satisfied myself that it would be quite a useless expense to have the water or contents of the stomach analysed.

155. Did you come to any conclusion as to the

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cause of the death of these cows?—I came at once to the conclusion that they were dying from a special disease having many of the characters of the one which we now know in this country as the Rinderpest. I made, however, no observation of that kind to Mr. Nichols or to his mother, or even to Mr. Priestman, the veterinary surgeon, until he, Mr. Priestman, got into the cab with me to return to the college, when I immediately said to him, and I think as nearly as possible in these words, "I believe that there is "no poison in this case, but that we have a new "cattle disease in the country."

156. When did you first satisfy your own mind that the disease which had broken out in England was identical with that which you had seen in Galicia?—Within a very days. There were some points of difference which required investigation, for example, there was not the same amount of discharge from the eyes of the animals, nor the same nervous twitchings about them that we had observed in Galicia. There were also other minor points which required to be investigated I however ascertained on the very next day that this was not an isolated case of the disease, and that the malady had appeared also at Hackney, and I was enabled subsequently to trace the introduction of the disease into two dairies at Hackney. It was on the morning of the 10th of July that I called the attention of the Privy Council to the matter; my attention having been first called to it on the afterpart of the 4th of July. I occupied five days in investigating the matter thoroughly to my own satisfaction, and on the 9th of July my mind was fully made up.

157. You had seen some other cases besides this of Mrs. Nichols?—The cases became very frequent directly afterwards. By the 14th of July I had ascertained that the disease had shown itself at another dairy in Islington, and also in others in Goswell Street, Holborn, Somers Town, Camden Town, Hendon, Dalston, Kingsland, and near to the Cumberland Market. There was a dairy of cows nearly opposite the Veterinary College, which was swept away, with one or two exceptions, in the course of ten days. The malady appeared on July 8th, and by the 19th the owner had lost by death 17 cows, in addition to three which he had sent away, out of an original stock of 21.

158. By that time had you made up your mind that the Rinderpest which you had seen in Galicia had actually broken out in this country?—Yes; having seen it first on the 4th of July, by the 9th, as previously stated, my mind was fully made up.

159. Did you make inquiry whether there had been any cases prior to this?—I made every inquiry which I could, both before and after calling at the Privy Council Office, and I was informed on the 26th of July that some cases had occurred previously to those at Mrs. Nichols in the neighbourhood of Whitechapel. I went to the place on the same day, and found that similar cases had occurred there, but rather after than before the cases which were observed at Hackney and at Islington. There was only a day or two's difference, but they were distinctly cases occurring after, and not before.

160. Can you give the particulars of these cases?—Yes. The animals belonged to a Mr. Dewson, who is a cattle dealer as well as a dairyman. The disease was first seen on July 1st, at which time the stock consisted of 15 cows. It was the custom of Mr. Dewson to keep about this number for milking purposes, but being a dealer in cows they were added to almost each succeeding market day, both by cows belonging to himself and also by others belonging to a Mr. Pack, who often buys cattle with him. All unsold cows are send to his sheds to wait for the next market day, and thus a portion of the stock was continually changing, and as it happened animals which had been exposed to the disease went directly to his sheds from the Metropolitan Market. On the occurrence of the disease 13 out of the 15 animals were disposed of, some for slaughtering, but how many I was unable to learn. The 13, however, are said to have been got rid of in less than a week. The two remaining animals are likewise said to have entirely escaped the disease. One of these I saw on the premises at the time of my visit.

161. Were you able to trace the origin of the disease in the cases at Hackney and at Islington?—The origin of the disease in the case of Hackney was the purchase of a cow in the Metropolitan Cattle Market on the 19th of June, being one sent from Buckinghamshire with several others by a Mr. Birdsey, who is a large cow dealer. The animal was bought by a Mr. Baldwin on Monday the 19th of June. Almost simultaneously with the appearance of the disease among Mrs. Nichols's cows this cow was attacked with the disease. Mr. Priestman, the veterinary surgeon, saw her on the evening of Wednesday, June the 28th. She died within 24 hours of being noticed to be ill, but the true nature of the disease was not suspected. No other case occurred at Mr. Baldwin's until July the 5th, when Mr. Priestman was called to a second cow which had also been bought in the Metropolitan Market on June the 19th. This animal was slaughtered. On Friday July the 7th three cows and a bull were attacked, and they also were slaughtered. On Sunday the 9th, four more were attacked, and were taken to the slaughter-house. On Monday the 10th another was slaughtered; thus making 10 out of Mr. Baldwin's stock of 20 in the course of 12 days. The animal he bought on the 19th of June in the Metropolitan Market was an English cow. Mr. Birdsey is a highly respectable cattle dealer living in Buckinghamshire.

162. Where did Mr. Birdsey get the animal?—That I cannot say; he bought it probably with other animals. His custom is to bring every market day a number of cows to London.

163. In the Islington case were you able to trace the origin of the disease?—Not so distinctly; Mrs. Nichols had a large dairy; it consisted at the time of the outbreak of the disease of 93 cows, and it is the custom in all large dairies of that kind to send cows to market nearly every market day out of the stock, as fat cows, and also to purchase fresh cows for milking purposes; consequently a large dairy is more likely to suffer from a contagious disease than a smaller one, presuming that the disease is abiding or has any existence within the market from whence the animals are brought. There can be no doubt that the disease was communicated either in that way or by foreign stock which had been in the market going into the lairs, as they are called, which are immediately connected with Mrs. Nichols's cattle sheds, the lairs being in the same yard and nearly under the same roof. Mrs. Nichols's chief business consists of taking in these animals from market day to market day, and also those which have landed at Blackwall and other wharves. Therefore, presuming that this disease was of foreign or even of English origin, there would be a great probability of her animals being early infected.

164. You were not able to trace up any one animal which Mrs. Nichols purchased in the market?—No. The first time that the attention of a veterinary surgeon was called to Mrs. Nichols's cases was on Tuesday, June the 27th, and to the Hackney cases on Wednesday the 28th. The note which I made on the 4th of July is this: "The first case "occurred on Tuesday, June the 27th; a cow was "seen ill, and Mr. Priestman's attention was called "to her, and to others which were attacked on the "following days. Eight or nine were then ill to a "greater or a less extent. Mrs. Nichols's stock consisted at the time of 93 cows. It was thought at "first that the animals had partaken of some deleterious matter, but as the disease went on I was "consulted by Mr. Nichols, junior, and by Mr. Priestman, who called at the college on July the 4th, "bringing with them the stomachs and intestines "of a cow which had died the day before. The "mucous membrane was inflamed in patches, and the

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" feculent matter contained in the intestines was " fluid, stinking, and of a dirty white colour. I " attended immediately, and found that 22 cows had " been disposed of since the outbreak, and that 12 " others were now affected."

165. Twenty-two cows had been disposed of in consequence of their illness?—Yes, between the 27th of June and the 4th of July.

166. In what way were they disposed of?—By being sent to the market, or to the slaughter-house. Some were disposed of to the knacker.

167. How many of Mrs. Nichols's herd died of the disease?—I could not understand. She lost the whole of the 93, and she subsequently bought some others, lost them, so that I think her total loss amounted to 109 or 110 animals.

168. But of those a considerable portion were sent for sale to the market when they appeared to be sick?—They were sent either to the slaughter-house or to the market. I think that in her case the greater part of them were sent to the slaughter-house, and not to the market.

169. You cannot state the number that died, and the number that were slaughtered?—There has been a difficulty in getting at such particulars; we experienced in this case just what we have experienced in every cowshed on the outbreak of the disease in London. We cannot get at the number which died and the number which are slaughtered.

170. You cannot give the Commission any information upon that point?—I can give no satisfactory information upon that point.

171. Was there anything defective in the arrangements of these dairies with regard to drainage or ventilation, or the general housing of the cows?—In Mrs. Nichols' case, nothing whatever. I never saw any animals better managed than hers were, and so nicely was everything kept that they could tell to half a pint of milk each morning and evening what each cow gave, and also to a pound of food what the animals consumed in a day. I had the feed book brought to me, and ascertained exactly what the animals had had, and the milk they had yielded. I considered that inquiry important as determining whether they had been poisoned by anything in their food.

172. In what part of London was this?—In Islington.

173. Can you describe the sort of building which they were in?—They are sheds with good roofs, and four walls to them. Some of the sheds are long buildings with walls of sufficient width to allow the animals to stand with their heads towards the wall, leaving a passage in the centre. Some of the sheds contained 20 animals; others more and some less. There was a free current of air through the buildings, and free egress and ingress, and the superficial drainage was all carried out at the end of the building. The sheds were kept very clean indeed.

174. Was it the same with regard to the Hackney case?—In the Hackney case the dairy was not so well kept as in the other case, as I was informed by Mr. Priestman. I did not visit the Hackney dairy to ascertain how things were managed there.

175. After these cases had come to your notice, what course did you pursue?—I kept myself, so to express it, constantly upon the alert to get information. I adopted all the means which I possibly could to obtain particulars of other outbreaks of the disease. Wherever I heard of outbreaks of disease I inquired into them for the purpose of ascertaining whether it was the same affection or not. I satisfied myself, in several instances, that it was not the same affection. Besides this, I sent a circular letter to every veterinary surgeon in England, asking whether any such disease existed in their several localities or not.

176. Were all the cases confined to London which first broke out?—All the original cases were confined to London, but in a very short space of time we had the disease in Norfolk, and also in Suffolk, and likewise in Shropshire.

177. I think you have said that you went to the Privy Council Office, and reported the disease there; were any steps taken which you suggested?—The course which I took was this:—I must inform the Commission that just at that time I was engaged on the part of the Government to inquire into an outbreak of small-pox of sheep which happened in the county of Sussex, and that put me into daily communication with Mr. Simon. As soon as I had satisfied myself of the exact nature of this affection, I called on Mr. Simon, and I had conversation with him on the subject, and he asked me to walk over to the Privy Council Office, where I saw Mr. Helps. The matter was then again gone into, and I immediately went with Mr. Helps to Sir George Grey, and had communication with him.

178. And the result of that was the issue of the present Order of the Privy Council?—The result of it was, the issuing of an Order in Council, chiefly for the purpose of ascertaining the extent of the disease existing in the London dairies. The order was to the effect that each person should give notice of the existence of the disease.

179. Had any cases been traced to the market at that time?—The cases occurring in Norfolk and in Suffolk, as well as those occurring in Shropshire, were traceable to the market.

180. Can you state any particular case, either in Norfolk or Suffolk, which came to your knowledge, and which can be traced?—I am hardly prepared this morning to give precise dates; but the letter I have here describes the outbreak of the disease in Norfolk. It was one of the first letters which I received. It was directed to my colleague, Mr. Varnell, the writer, Mr. Gooch, thinking that I might be out of town. It is dated Reepham, July 22d, 1865. " Dear Sir,—It sometimes " happens that you are in Norfolk at this time of the " year, if so I have a lot of Dutch bullocks which I " should like you very much to see; they belong to " Mr. Leeds of Whitwell. He bought 26 on the " 1st of July at 9*l.* each. They all came home " very fresh and looked well. In about four or five " days several were attacked with acute fever, putrid " fever, or pest. Eleven are dead, and several more will " not last more than a day or two; all have taken the " disease, and only about three appear to be getting " better. Four others which have been mixed with " them are coming down with it, one of which is not " likely to live. The first symptoms are a particular " redness of the nose and mouth, attended with great " heat, a yellowness of the skin, and the hair standing " up. In most cases a cough with great difficulty in " breathing exists, the animal making more noise in " expiration than in pleuro-pneumonia. The bowels " are slightly costive, but about the third day a " looseness takes place, the excrements being watery " and offensive. Afterwards a viscid slimy matter is " discharged. The membranes of mouth, nostrils, and " eyes are redder than natural, and discharge very " much; in some quite a purulent matter. The " mouth and throat in many cases are so affected " that the membrane sloughs off in places. They last " about four, five, and six days. I never saw anything " like it before. One night four died. Mr. Sayer of " Norwich has been over to see them. Mr. Emms of " Foulsham has eight out of the lot at another farm of " Mr. Leeds which he attends to. He has lost four out " of eight, and I have lost seven out of 18. I will thank " you to send me word if you have had any report of " anything of the same kind from any other part. " Your obedient servant, R. P. Gooch." A second letter from Mr. Gooch is to this effect:—" I have to " thank you for your kind note of the 29th instant, " and in reply I have to inform you that Mr. Leeds " has lost 13 out of the 26 Dutch beasts. When " they first came home he divided them into two " lots, placing 18 at Whitwell, and eight at Thim- " blethorpe about four miles distant. First, as re- " gards the Whitwell lot, they have all had the " disease, and eight are dead; the remaining 10 " appear to be recovering; some have been very

"bad. They were mixed with four others, which "have all taken it, and one has died; one is better, the "other two now suffering; and I do not think they "will live. At Whitwell there is a common adjoin- "ing Mr. Leeds with about 30 cattle on it; two are "attacked, and are not likely to recover, and others "are showing symptoms of the disease. Out of the "Thimblethorpe lot five are dead, and three are re- "covering. I have been called to two farms in that "locality where the disease has broken out; one animal "is dead, and several others are bad. I have also "heard of another farmer having it. I find at North "Walsham a dealer bought 38 'Irish buds,' at about "about 5*l.* each. 36 are dead; and from this lot the "disease has spread to several farms adjoining, and "the stock are dying fast. I have not at present "heard about any more cases in Norfolk; if I should "I will write, and say how the disease goes on."

181. How does he trace the origin of the disease as respects Mr. Leeds's cattle?—From the purchase of some Dutch bullocks in the Metropolitan Market.

182. (*Mr. Read.*) Did he buy them in the Metropolitan market?—Mr. Leeds himself, I believe, did not buy them in the Metropolitan Market. You, Mr. Read, are thoroughly acquainted with the details of this case, and will probably state where Mr. Leeds did obtain them from.

183. They were bought by a dealer of the name of Goss in the Metropolitan Market, and brought on to Norwich, and sold to Mr. Leeds?—Yes. Mr. Goss's report is, that on Thursday, June 29th, he bought 44 Dutch oxen of Mr. Poole, and sent them on to Norwich, and sold 26 of them on July 1st to Mr. Leeds of Whitwell; and that he heard last Saturday that 11 were dead and the the others were ill. This is Mr. Goss's own report to me, as entered in my note book,—so that the disease is clearly traceable to the Metropolitan Market.

184. (*Chairman.*) Is it known where Mr. Goss obtained the cattle?—Mr. Goss obtained them of Mr. Poole, who had them direct from Holland.

185. And have you been able to trace the disease existing amongst this lot of cattle before they were on the market?—I have not. Subsequent information brought out a remarkable fact, namely, that in July we were receiving diseased cattle from Holland. I was surprised to find that a great number of animals that were sold in the Metropolitan Market during the month of July and also in August, and which gave evidence of the disease, were Dutch cattle. I thought it not unlikely that when persons called them Dutch they might not really be Dutch, but foreign cattle. It is a very common thing to call almost all foreign cattle "Dutch cattle," but in tracing matters out, I found that they really were Dutch cattle, and that it appeared that Dutch cattle were more frequently affected by the disease after having been in the Metropolitan Market than other foreign or English cattle.

186. You have used the word "disease;" do you mean this particular disease?—Whenever I use the word disease, I mean rinderpest.

187. (*Dr. Playfair.*) Did you say that it was an imported disease from Holland?—I shall be able, I think, to explain it more fully.

188. (*Chairman.*) You were speaking of the Norfolk case; you alluded to the importation of disease through the Dutch cattle. Will you give the Commission some facts as to the introduction of the disease from Holland?—I think that the inquiry had reached as far as this, namely, that diseased animals had found their way from the Metropolitan Market into Norfolk, and that they had communicated the disease, that is the rinderpest, to animals which they came in contact with. I have stated that Dutch cattle were known to be affected with the malady in the month of July; and that several of the subsequent outbreaks of disease in different parts of England depended upon persons buying Dutch cattle. I said that at that time the facts were not very ready of explanation, but that subsequent investigation of the matter showed that they were very easy indeed of explanation. Thus in the month of June a Mr. Defries, who lives in the neighbourhood of Schiedam, sent over a number of oxen to his son, who is a cattle salesman in the Metropolitan Market, for sale; they were fat cattle, and Mr. Defries, junior, had an offer for them of only 13*l.* 10*s.* per head. These animals went into the market on the 22d, the 26th, and on the 29th of June, or, more correctly, 12 only of the lot went in three times, and the other 11 went in twice. As he was only offered the sum of 13*l.* 10*s.*, which he considered not their value, he communicated with his father, who determined to have the animals sent back again to Holland, and they were so sent back.

189. How many were sent back?—Twenty-three.

190. The whole number were sent back?—Yes, the whole 23. During the intervals of these animals going into and out of the market, they were placed in Mrs. Nichols' lairs and fields, where the malady was then existing. You will not have failed to have observed that we have evidence of an outbreak of disease in Mrs. Nichols' case on the 27th of June.

191. On what day were they sent back to Holland?—They were sent back to Holland on the 2d of July. They went from Blackwall in a vessel called the "Batavia." They were seen by Mr. Simmonds, the inspector for the Customs, at the time of their being put on board the vessel, who is reported to have remarked that they had an unhealthy appearance, but he had no power to stop their exportation. The Commission is aware that his duties consist of inspecting animals that are imported. Within a few days of their arrival at Mr. Defries's, that is in the neighbourhood of Schiedam, the malady had so far extended among them that 21 had died. I cannot give you the dates of their death; but if it is the wish of the Commission to examine Mr. Defries, the cattle salesman, who is in London, he will probably be able to give you the precise dates. On their arrival in Holland they were placed in a marsh adjoining another, in which were a number of cattle belonging to Mynheer Frank Vandervelden at Kethal, to whose animals they communicated the pest.

192. Those cattle of Mr. Defries communicated the disease to the cattle belonging to Mr. Vandervelden?—Yes. Before, however, the nature of the disease was known Mr. Vandervelden had sold upwards of 20 of his oxen, by which it unfortunately happened that the disease was spread in the district.

193. To whom had he sold those animals?—That I do not know. The notes I have at hand show that the malady was afterwards re-imported into England week by week, all parties acting in perfect ignorance that the pest was incubated in the systems of the imported animals.

194. As far as your evidence has gone it implies that the disease of those cattle of Mr. Defries had been acquired in London, and not in Holland; have you been able to trace it at all in London?—They were in the Metropolitan Market on the three occasions referred to, namely, the 22d, 25th, and 29th of June, and we proved distinctly that as early as the 19th of June we had the disease in that market.

195. (*Dr. Playfair.*) Have you proved that yet?—Yes; the Hackney cows prove it.

196. Have you proved that there was disease in the Metropolitan Market?—We have proved that a cow that was bought there died ten days afterwards with the disease, and which disease she must either have received in the market or have engendered, presuming that the incubation of the pest is about nine or ten days.

197. (*Chairman.*) When did Mr. Defries's cattle arrive in London from Holland? When did they land in England?—I am not sufficiently precise as to the day they arrived in England, but they arrived in England so as to go into the Metropolitan Market on the 22d of June.

198. And the disease did not show itself among those cattle until after the 3d of July. Is that the case?—The disease did not show itself in those

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animals until their arrival in Holland, to an extent sufficiently to destroy life, but they were observed to be out of health when they left England on the 2d of July.

199. At that time were any inspectors appointed in the Metropolitan Market?—There has always been an inspector who acts under the Corporation of the City of London, and I have no doubt that he was present throughout the whole month of June.

200. Would his attention have been specially directed towards cases of Rinderpest?—Not at all; nobody had the least idea that we had any such disease existing in the country in June; at least it was not until the 27th of June that we had any evidence of the disease being here. One case occurred in Mrs. Nichols's establishment on this day, and a second in Mr. Baldwin's establishment at Hackney on the following day.

201. From the evidence you have given with reference to Mr. Defries's cattle, it would appear that they may either have caught the disease on Mrs. Nichols' premises or in the Metropolitan Cattle Market?—Yes.

202. You have not been able to trace it further than that?—I have not been able to trace the taking of the disease further than that. I am enabled, however, to state that at that time, namely, during the whole of June, to use a common expression among salesmen, there were dull times, or bad markets, and animals consequently went in and out of the market day by day; for example, if they were not sold to-day, they went back into the lairs, and were brought again into the market the next day.

203. Are there any more cases in which you can trace the introduction of the disease into England from Holland?—Yes; there are several cases in which we can trace the introduction of the disease from Holland.

204. Prior to its introduction into Holland from England?—No; the only case in which we can trace the disease from England into Holland is the one to which I have referred, but subsequently to that we have traced several outbreaks in England which were dependent upon the introduction of animals from Holland.

205. Have those cases been traced up to the cattle of Mr. Defries, which cattle originally caught the disease in the cattle market in London?—They have been treated as coming out of the same district in Holland where Mr. Defries's and Mr. Vandervelden's animals were.

206. (*Dr. Playfair.*) Was any disease known in Holland before that period in July when those animals of Mr. Defries were shipped from England to Holland?—There not only was no disease known in Holland, but at my request a communication was sent from the Foreign Office to the authorities in Holland,—I cannot say exactly when, excepting that it was in the latter part of July; and the answer that was returned by the Dutch Government was that they had no disease of the kind in Holland. The disease indeed had absolutely existed in the neighbourhood of Schiedam for some fortnight or three weeks without the Dutch Government knowing anything whatever about it.

207. At what time did it exist near to Schiedam?—It broke out there immediately on the arrival of the animals that left London on July 2d, and it extended to the animals that belonged to Mr. Vandervelden: and by the sale of 20 of them before the true nature of the disease was known the malady was spread.

208. Is it your opinion that the appearance of the Rinderpest in the Metropolitan Market is not to be attributed to the importation of animals from Holland?—Its original appearance there? Most certainly not.

209. Why was it that the Dutch cattle when they came over to England were not sold, but were returned?—I have already explained to the Commission that during the month of June there were what are called dull markets, and the animals consequently were not bid that price for that the seller thought they were worth. Mr. Defries, not receiving an offer greater than 13*l.* 10*s.* for the animals, considered that he would lose a large sum of money, and he therefore communicated with his father, who replied that rather than sell them at 13*l.* 10*s.* each in England he would have them sent home to Holland. They were very good and healthy animals, and they were merely sent back to Holland because a better offer was not made for them, or an offer equal to their value, there being, as I have said before, dull sales at that time of the year there.

210. (*Chairman.*) Can you give the Commission any information as to the Revel case, which has been so often quoted?—Yes, I can; but perhaps I may first observe as to that case that I had received information of a number of animals being likely to arrive from Russia; that information was given to me one day while I was at the Veterinary College by a person who was himself somewhat connected with the importation of the animals. He mentioned it in a very incidental manner; but the conviction at once flashed across my mind that it was not unlikely if we went on importing animals from Russia direct that we should not be very long without introducing the Rinderpest. I felt therefore a deep interest in the matter, and I determined to keep my eye upon this lot of cattle, and to make all the inquiries that I could.

211. At what date did you receive that information?—I made no note of the date, but judging from circumstances I think it was about the beginning of the month of May. The animals left Revel on the 22d of May.

212. (*Dr. Playfair.*) Were they not 6 days on their journey?—Yes.

213. (*Chairman.*) You heard in the beginning of the month of May that some cattle were likely to come from Russia?—Yes; the number of the Russian cattle originally consisted of 321 oxen. They were imported by Mr. John Honck and Mr. Baker and Mr. Burchell. Mr. Burchell, who had been for some time in Russia, made a contract with certain persons for the purchase of a number of animals to be delivered at Revel; after which he returned to England to supply himself with funds to pay for the cattle. An arrangement was made between him and Messrs. Honck and Baker, who are not of the same firm, but are consignees and large importers of cattle, for them to provide the money, and he, Mr. Burchell, to receive a certain per-centage of the profit. He represented that the animals could be purchased in Russia at a very small rate indeed, and that they could readily be transported by way of the Baltic when the ice broke up, and that the transaction would leave a very large profit; in fact that it would be something like a profit of 100 per cent. Messrs. Honck and Baker put themselves in communication with a banker at Revel, and the money was placed there at Mr. Burchell's disposal. Mr. Burchell's contract was for animals weighing not less than 1,000 lbs. live-weight, and the number that he had agreed to buy were offered to him for embarkation, but as many did not weigh 1,000 lbs. he only took a certain number of them. Those animals were obtained from the Esthonian Agricultural Society. It has been supposed that the whole of the Revel cattle came from the Esthonian Agricultural Society, and that they were animals which had been fed in the sheds of persons for the purpose of sale, and consequently that they must have been all healthy and free from disease. Mr. Burchell, however, states that beyond the animals supplied to him by the Esthonian Agricultural Society, a number were sent down from the neighbourhood of St. Petersburg for him to choose from to meet the requirements of the contract, and that those animals were considerably injured on their journey. Finding that they were very much bruised, he refused to take them, thinking that they would not be saleable animals when they came to London. A dispute arose between the parties, and he had to

call in two experts, who were butchers, to determine whether any of the animals were, or were not, in a fit condition for him to take. They agreed that 13 of them were in a fit condition, and the 13 animals were consequently added to the number furnished by the Esthonian Agricultural Society, a point which I think is of great importance in tracing this disease. All the animals, consisting of 321, were shipped on the 22d of May, at Revel, and they came by the Baltic to Hull. The vessel called at Copenhagen for orders, and she made the passage in six days.

214. At what date did she call in at Copenhagen? —I do not know; but she arrived in Hull on the 28th of May, having made the passage in six days.

215. (*Dr. Quain.*) Are you including the 13 now? —Yes. I may remark in this place that 322 were selected, but one animal died in the yard before they were put on board, which reduced the number to 321. As to the cause of the death of that animal we have no evidence, but there is the fact that one of them did die.

216. (*Chairman.*) Did the animal that died belong to the 13 that were injured when they arrived at Revel?—Yes.

217. You have traced these animals to Hull. Will you be so good as to continue their history?— When Mr. Burchell started from Revel he was ordered to call at Copenhagen, because it would depend upon the state of the market and other things whether the animals should come on direct to London, or go to Hull, or anywhere else. He called, as I have said, at Copenhagen for orders, and he was directed to go to Hull.

218. What was the name of the vessel?—The "Tonning," steam vessel.

219. What nation did she belong to?—She was an English vessel. When she arrived at Hull, the animals, if examined at all, are said by Mr. Burchell to have been imperfectly examined.

220. Is it not usual for the Custom House officers to examine the cattle when they arrive?—Certainly so.

220*a*. Is any examination made by a veterinary surgeon?—A veterinary surgeon is, I believe, placed at each of the ports for the purpose of examining the cattle, but it is well known to the cattle trade that certain inspectors have been a little lax in the discharge of their duties. It has been said that some of the importers will even send a vessel round to a port where they know there will be but a very slight examination made, and that they will stop the vessel, and telegraph, "Make" so and so, or "Make" so and so.

221. If the law was properly carried out, cattle on arriving at a port would be inspected by a veterinary surgeon?—Yes, if the law is properly carried out they should be inspected closely by a veterinary surgeon at every one of the ports.

222. Will you be good enough to state what took place at Hull when the cattle arrived there?— According to the evidence of Mr. Burchell, whom I should wish to be called before the Commission, the animals were very imperfectly examined at Hull, and did not go into the Hull market, but 146 of them were sold in the field, to which they were sent direct from the vessel. I may mention that my information was obtained originally from Mr. Honck, and Mr. Honck may perhaps retort upon me by making an observation that he has made before, that I was satisfied of the healthiness of this cargo. My observation, however, to him was this: "It is necessary, "the disease having been introduced into England "from somewhere, that we should clear as many "cattle with regard to which suspicion may arise as "is possible."

223. You say that you obtained your information from Mr. Honck?—Yes, originally.

224. How many of these animals arrived at Hull? —The whole 321. One animal was ill on board the ship, and only one, according to the evidence of Mr. Burchell, who left Revel with them, and travelled all the way to Hull.

225. Was this case reported by the veterinary surgeon?—I believe it was not reported by him.

226. (*Dr. Quain.*) Did the animal that was ill on board recover?—Yes; they gave it brandy and water, and stimulants of that description, while on board the ship. The 146 which were sold in Hull went to Manchester.

227. (*Chairman.*) Were they sold in the public market?—No; they were sold near to the landing-place; they did not go to the public market. They were purchased by a salesman of the name of Septimus Lambert at Manchester.

228. Is it usual for cattle to be sold near to a landing-place instead of in the market?—I think it is not at all unfrequent. After these cattle came into the possession of Mr. Lambert, they were taken to Manchester, and it is stated that some of them were subsequently sold to go to Wakefield and others to Derby; but I should state that they were all sold for immediate slaughtering.

229. Can you give the dates of these transactions? —I cannot; but Mr. Lambert, if called, will be able to give that information.

230. Have you been able to trace the history of any of those 146 cattle subsequently?—The only information I have obtained about them is this, that after they were purchased by Mr. Lambert, he sold them for slaughtering, and that some of them were slaughtered in Manchester, others of them in Wakefield, and others in Derby. I have been able to trace no disease at all in connection with those animals.

231. Have you been able to trace the history of the remainder?—The remainder came on to London.

232. How did they come?—They came by railway, 175 of them, and, with the exception of 20, they were sold in the Metropolitan Market on Thursday the 1st of June.

233. Do you know who bought them?—Mr. Honck has informed me that 25 were sold to Mr. Lialter of Whitechapel, 24 to Mr. Webb of Newgate Market, 20 to Mr. John Cook of Whitechapel, 10 to Mr. Howard of Whitechapel, 8 to Mr. Hopwood of Whitechapel, 3 to Mr. Burrows of Whitechapel, 14 to Mr. Joseph Nathan of Whitechapel, 24 to Mr. Favell of Newgate Market, 7 to Mr. Green of Portsmouth, for the troops, 10 to Mr. Nind of Newgate Market, 1 to Mr. Bee of Newgate Market, 27 to Mr. B. B. Baker of Newgate Market, and 2 to Mr. Hartwell of Whitechapel.

234. Does that account for the whole number?— Yes, for the whole 175.

235. And they were all sold on Thursday the 1st of June?—No. I should explain, that 20 of them were first picked out by Mr. Baker on their arrival in London on the 31st of May, and were sent down to Gosport for the supply of the shipping at that place. The statement of their sale would make it appear that all of them were sold in the Metropolitan Market on the 1st of June. Twenty-seven are put down to Mr. Baker.

236. Have you been able to trace any of those lots any further than you have stated?—No; they were all sold in the Metropolitan Market for immediate slaughtering, with the exception of the 20 selected by Mr. Baker.

237. You cannot trace any connexion between any of those animals to any animal which was affected by the Rinderpest?—I can trace no connexion between these animals and any other animal which was subsequently affected with the Rinderpest; the only connecting point is, that on their arrival in town they were lodged in Mr. Honck's lairs in Maiden Lane, near to the Metropolitan Cattle Market, and went into the market for sale.

238. When did they arrive in London?—They arrived in London either on the 29th or the 30th of May. I presume it was the 30th of May.

239. And where were they placed?—In the lairs belonging to Mr. Honck in Maiden Lane, near to the Cattle Market.

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240. Will you describe the lairs you are speaking of?—They are yards or places where animals are kept from one market day to another. They are put there on arriving from the country or coming from abroad.

241. Are they in the open fields?—No; they are yards mostly having sheds in them, under which the animals can congregate.

242. It is not your opinion that the Rinderpest was introduced into England by this cargo of cattle?—I think it is highly probable that it was so introduced, but we have no direct evidence that it was. We can only show that the animals came from Russia, and that they were the first lot that ever did come from Russia by way of the Baltic. Any Russian animals that may have come here before have been first sent into Germany and fattened. We know, further, that these animals came from a district, or rather from a country, that is known to be the seat of the plague, and that within 19 days of their arrival we had the disease thoroughly established in the Metropolitan Market.

243. Were any of these animals steppe cattle?—That I am not able to say, but they were Russian cattle; whether they were purely Russian steppe cattle, or not, I do not know.

244. Have you endeavoured to trace any of those Russian cattle to their ultimate destination?—They were all immediately slaughtered, and therefore all the evidence is destroyed.

245. Were all the purchasers of those animals butchers?—Yes; with the exception, I believe, of Mr. Baker. They were all sold for slaughtering.

246. Have you ascertained that all those animals were slaughtered at the time you have mentioned?—Yes, as I am informed. I made particular inquiries into that.

247. You do not believe that any one of those animals remained alive, say after ten days from the time when they were sold?—I have not been able to trace any one animal that remained alive. I have got the names of all the persons, as furnished by the importer himself, to whom they were sold, and those persons alone are able to say whether they killed all of them or not.

248. Have you made any inquiries as to the ship in which these animals were conveyed, and whether it was used in the cattle trade subsequently to the disembarkation of these cattle at Hull?—I have no doubt that the "Tonning" has been engaged in importing animals since then. I believe that she scarcely ever lies idle; it is an important point; but I should imagine that the ship belongs to such parties that they would see she was well cleaned after each voyage, and before she went out again.

249. (*Viscount Cranborne.*) Have Mr. Honck's lairs been the seat of the disease?—Not that I am aware of.

250. Did you make no inquiries as to whether those were steppe cattle or not?—I cannot say that I did; but I do not hold the opinion which has been expressed by Mr. Ernes as to steppe cattle being alone the subjects of this disease, carrying about the germ of it with them. I hold that Russia is the seat of the Rinderpest, both in the steppes and out of them, and that the disease exists not only in Asiatic Russia, but very frequently in European Russia.

251. When you say "out of the steppes" do you refer to all parts of Russia?—I refer to all parts of southern Russia.

252. Do you base that opinion upon evidence which you have obtained?—I base it upon inquiries which I have made, and upon evidence.

253. Do you mean inquiries that you have made on the spot, or evidence that you have obtained from books?—I mean inquiries that I made when I was in Galicia, in northern Europe, and in Prussia, and from what information I have been able to obtain since.

254. You are probably aware that in expressing that opinion you differ from all the German and Russian authorities upon the subject?—I do not think it will be found that I differ from them all, but that I differ from only a very few of them. There are scientific men who hold the opinion that this disease has a spontaneous origin in the steppes of Russia and nowhere else; but I want to know where the line of demarcation is to be placed—where the disease springs up spontaneously, and where it results from contagion alone. We may narrow the space so as to come down to the length of this room, and say therefore that it is spontaneous on that side of the room (*pointing to the same*), and only spread by contagion on this.

255. You believe that the whole of southern Russia is the seat of the spontaneous generation of this disease?—I do not believe that it has a spontaneous origin anywhere. I believe that the whole of the southern part of Russia is the home of the pest, and that it always abides there.

256. Do you mean to say that it originally made its appearance there?—I cannot say that, or whether it came from Asia, or whether it is a continuance of the plague that fell upon the Egyptians; I think that we know no more of the origin of this disease than we do of the origin of small-pox or the cholera.

257. Do you believe that there is no instance of the spontaneous generation of the disease?—I believe so.

258. Do you apply that opinion to northern Russia as well?—I do not know that the disease does exist there, but, presuming that it does, I should apply the same opinion to northern Russia.

259. Why do you believe that the disease existed at St. Petersburg when the cargo of cattle to which you have referred was imported?—I only know this, that the whole of southern Russia is affected from time to time with the disease, and that if I were to start upon a mission to-morrow I should soon be able come up with the disease.

260. Is there free intercourse between the cattle of southern Russia and the cattle of northern Russia?—I believe that there is free intercourse between southern and northern Russia.

(*Mr. Ernes.*) I believe there is free intercourse.

261. (*To Professor Simonds.*) Have you any knowledge of the disease having existed in any part of northern Russia with reference to the importation of the cattle you have spoken of?—I have no knowledge of the kind; I merely know the general fact, that the disease always exists in Russia.

262. You mean southern Russia?—Yes; particularly southern Russia.

263. Entirely southern Russia?—No; I do not say that, but I would ask whether you would place St. Petersburg in northern Russia or in southern Russia?

264. Have you any knowledge of the disease in the neighbourhood of St. Petersburg as a persistent disease?—I have no knowledge of its being a persistent disease in the neighbourhood of St. Petersburg.

265. I am at a loss to understand your reason for believing that the disease was imported from St. Petersburg on this occasion?—It has been shown, so far as the information has gone, which has been obtained from the Russian authorities, that there was no Cattle Plague existing in May in Esthonia. How much that information is worth I cannot say; but I know this fact, that the disease, which I have already stated exists generally in Russia, spreads from time to time in Russia, and that we can always meet with it in different parts of the country. I think it, therefore, not improbable that at the time when these animals were selected from the neighbourhood of St. Petersburg, the disease, if not existing in Esthonia, might have existed in the district from which these animals came.

266. Can you give the Commission an idea of the particular parts of Russia in which this disease generally prevails?—This disease mostly prevails in what we call southern Russia; it prevails not only

there, but also in Moldavia, Wallachia, and in Podolia, and adjacent countries.

267. Does southern Russia include Moscow ?—I think Moscow is in northern Russia.

268. (*Dr. Parkes.*) I understand that these animals left the market on the 1st of June ?—Yes.

269. And that the first case occurred on the 27th of June ?—No ; the first case which was recognized in England was certainly on the 27th of June, but a case which occurred on the 28th of June was in an animal that was bought in the Metropolitan Market on the 19th of June; that animal was the first to be affected by the disease, and she communicated the disease to other animals on the premises to which she was sent.

270. Mrs. Nichols's case was on the 27th of June ?—The attention of Mr. Priestman, the veterinary surgeon, who attends both for Mr. Baldwin and for Mrs. Nichols, was called to Mrs. Nichols' cows on the 27th of June, and to Mr. Baldwin's on the 28th of June.

271. It would appear that there were 19 days between the time when the cattle left the market and the first visible incubation of the disease ?—Mr. Baldwin's cow was bought in the market on the 19th of June, and it was on the evening of the 28th when Mr. Priestman saw her, and 19 and 9 make 28. She was seen to be ill on the ninth day after exposure in the market, where at the time it is more than probable that several infected animals were located. The ordinary period of incubation is nine days.

272. From the time when the Revel animals left the market it was 19 days ?—Yes ; and it is just the connecting link that we want between the 1st and the 19th. That is where we fail.

273. How long was the cow in the market before she was bought ?—Probably not less than five or six hours on the 19th. We have it also proved by the cattle which were sent back to Holland, that on the 22d of June the disease was established in the Metropolitan Market, as those cattle took the disease away with them.

274. I suppose that the butchers who bought the Revel cattle would take care that they were at that time not in a diseased state ?—I do not suppose that butchers would buy any animals that were apparently diseased, but there might have been convalescent animals among them, or the one animal that was ill on board the ship might have been the subject of a mild attack of the disease, so that a butcher would not think it was sufficiently diseased to prevent its being sold, especially as it went into the neighbourhood of Whitechapel.

275. Could you ascertain from the butchers, whether, when they killed the animals, they noticed any disease ?—It was quite impossible to do this.

276. (*Mr. Read.*) You say that you have two links ; one on the 1st of June, and the other on the 19th. What is the link on the 1st of June, except that certain cattle from Russia were sold in the Metropolitan Market ?—There is no other link. We presume that the Revel cattle were the subjects of this disease, and that they brought it into this country, but then we want the connecting link between the sale of those cattle on the 1st of June and the existence of the disease in the Metropolitan Cattle Market on the 19th of June. This, however, I think I may say, that prior to the importation of the Revel cattle there was no disease of this kind in the country—that is, there was no recognised disease of this kind in the country.

277. Then, of course, the first link is merely presumptive. Presuming that those cattle did bring the disease into the country, there is no connecting link between the 1st of June and the 19th of June ?—No ; I have none.

278. I apprehend that from the 22d of May, when these cattle were shipped at Revel, until the 2d or 3d of June, not a single case of disease of any sort appeared in any of those 320 cattle ?—Not that I know of. One animal is admitted to have been ill on the passage. With regard to the disease existing in Russia, and particularly in Esthonia, I may, perhaps, be allowed to say that I put a series of questions to Mr. Burchell, and I have his answers in writing.

279. (*Professor Spooner.*) You allude to the person who had charge of the cattle ?—Yes; the person who came with them all the way, and had of course the entire charge of them.

280. (*Mr. Lowe.*) As I understand you, you cannot show that the places from which these cattle were imported were the seat of the disease ?—Only by what Mr. Burchell has stated.

281. I understood you to say that there was no disease there at the time ?—The Russian Government, I believe, reported to the Foreign Office that there was no disease in Esthonia.

282. You cannot show that these cattle had any disease upon them ?—I cannot show that they had Rinderpest, but I can show that one animal died in the yard before the animals were shipped, and that one was ill on board the vessel.

283. That was probably not more than the average ?—One animal can scarcely be called an average out of a cargo of 321.

284. You are not able to show that those animals communicated the Rinderpest to any animals in this country ?—No, I cannot.

285. (*Professor Spooner.*) You have stated that all previous importations of Russian cattle have passed through either Prussia or Austria in order to reach this country ?—Yes, if any have come ; but it is a disputed point whether we have ever had any Russian cattle excepting those that have been referred to.

286. You would presume, I suppose, that in the event of Russian cattle having been previously imported into this country, they had undergone before they were exported from the Continent a close inspection with reference to this disease ?—Not only that, but they would be taken into Mecklenburg or Holstein or Denmark for fattening before they came here, and would necessarily remain there sometimes for months.

287. With the exception of those animals that were imported into this country from Holland, and which I think you rather lead us to understand had been previously sent from this country, what has been your experience with regard to foreign cattle brought into this country, say within the last six months ?—That they have been very healthy indeed, and I thus show by negative proof why there is greater suspicion attaching to the Revel cattle. It is well known to every person that immediately the authorities in any of the countries in Western Europe knew of the existence of this disease it would be almost impossible for animals to be got from out of the infected districts ; and there have been no regulations put into operation to prevent the free transit of cattle from out of Austria or Galicia or Prussia, and down to this time the trade is unrestricted.

288. (*Dr. Playfair.*) I think you stated that the steppe cattle were easily recognised ?—Mr. Ernes stated that.

289. That they were of a peculiar character and very easily recognised ?—Yes ; they are so.

290. If there had been any steppe cattle the inspector at Hull certainly would have recognised them, would he not ?—I should think not, for, in all probability, the inspector at Hull, as well as others of the inspectors at our ports, would scarcely know a Russian ox when he saw it for the first time.

291. Would not these cattle have been recognised in the Cattle Market here ?—Unquestionably they would have been recognised as foreign cattle.

292. And as peculiar animals ?—Yes.

293. Is there any reason to believe that there were any of the steppe race of cattle amongst them ?—I cannot answer that question.

294. How long would it take for cattle to come from St. Petersburg to Revel, and what is the period

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of incubation in the disease ?—The period of incubation will be found to vary, but I think it is seldom less than seven days, and it may be extended to 14 or 15, or perhaps to a longer period than that.

295. From the time that the Petersburgh cattle were mixed with the Esthonian cattle, to the 1st of June, when they were exposed in the Metropolitan Cattle Market, was there not ample time for the incubation ?—The other Russian cattle were mixed with the Esthonian cattle about the 21st of May, the day before they quitted Revel, and the period of incubation, 10 days, would be just about expiring.

296. Is it not the fact that the importer stated that the cattle were not in a fit state for immediate slaughter ?—I think not; they complained of the animals being not fat enough for the English market, and consequently that they had to be sold at a diminished price, and that left so small a profit that it became a source of dispute between Mr. Burchell and themselves. Mr. Burchell had represented that these animals were all fine animals and fit for the English market, but they were found on their arrival not to be so, and they were not considered fit to be kept here to be made fatter.

297. As to the 175 head of cattle sold in London, and the 146 head which were sent to Manchester, Wakefield, and Derby, and the 20 which were sent down to Gosport, is there any account of the disease having been sown in any of those places before the 19th of June ?—Not that I am aware of.

298. (*Mr. Read.*) Have you any idea of the price that these cattle realized in London and elsewhere ?—No, but they were represented to have been bought at the rate of 2½*d.* per lb. by Mr. Burchell.

299. (*Chairman.*) Have you any other cases besides this Revel case in which you think you can trace the introduction of the disease into England from foreign parts ?—None whatever. I have failed to trace any other animals. We are getting animals from Hungary and from Galicia, and I know that those are parts of the Continent where the disease may be looked for from time to time. There is indeed a great probability that we may introduce the disease either from Hungary or Galicia or from Austria Proper; but such are the regulations there, that I scarcely think the disease could exist, and we get it from there. At any rate there have been no restrictions put in the way of the cattle trade.

300. I think you say that as a general rule foreign cattle are healthy ?—Foreign cattle, I believe, never came more healthy—I mean Hungarian, Austrian, and Galician cattle—than they did during the time that we have been speaking of, and even down to this time.

301. I believe you consider that the disease may be imported by hides; is there any chance of its being imported by foreign hides ?—I think there is no chance whatever of its being imported by foreign hides, unless the disease existed in Holland or in some other countries from which we might import hides. I have made strict inquiries with respect to the trade in hides, and have found that the Russian hides are salted, and then sent into Lubeck; that in Lubeck they are dried, and a great part of them sent up the Rhine as far as Switzerland. There was no export of fresh hides from Lubeck. I think, that looking at the system which is necessarily observed in the preservation of hides, we have a great security against the disease coming into this country by Russian hides. Unless we had fresh hides introduced from Holstein, or Denmark, or Holland, or Belgium, as I have previously remarked, and the disease existed in those countries at the time, there is, I think, no risk whatever of our getting the infection.

302. In what way did they disinfect the hides in Galicia ?—They were placed in a tub, and lime and water was put upon them. Lime was chiefly used for the purpose.

303. (*Mr. Read.*) Not a very good disinfectant ?—No; but they were taken out after being kept for a certain length of time in the mixture, and dried and kept upon the farm until the authorities thought fit to let them go for sale.

304. (*Dr. Parkes.*) During the period of incubation of the disease, say during the first eight days after exposure, can the infected cattle transmit the disease to other cattle ?—That is a problem which has not been satisfactorily solved, I think; but I believe, from all the observations that I have made as to diseases of a contagious nature, that as the period of incubation draws on, and as the time arrives for the declaration of the symptoms, animals can propagate the disease.

305. With regard to the Rinderpest, have you any observations to make ?—I think that late in the period of incubation the disease may be communicated.

306. (*Chairman.*) I suppose from your position very many cases which have occurred in London have been brought to your notice; have you been able to trace the disease to its source in many of those cases ?—We have been able to trace the source of the disease in several cases, but not, perhaps, in very many, and this in consequence of the system which prevails of persons sending animals to the Metropolitan Cattle Market and having them back again. One will be able to gather how the disease may have spread from a knowledge of the fact that there has scarcely been a market day up to within the last fortnight when there have not been animals sent out of the London dairies which have been the subjects of the disease, or been herded with the infected.

307. (*Dr. Playfair.*) And they have not been stopped by the inspectors ?—Some of them have been; but it is almost impossible to stop them all, for they are in and out of the market, and all sorts of tricks are had recourse to to get rid of them. We often fail to get information as to the whereabouts of the disease; perhaps it shows itself in a shed, and the man has ten cows; he will keep back one or two diseased ones, and send all the rest to the Metropolitan Market, and then give us notice.

308. (*Chairman.*) Some cases have probably come to your knowledge in which the disease has broken out spontaneously ?—There have been many cases which have come to my knowledge in which I have not been able to trace the introduction of the germ that would give rise to the disease, but nevertheless I cannot come to the conclusion that these have had a spontaneous origin.

309. Are there a good many cases of that sort ?—There are some, but not a good many.

310. Are there any cases which you can instance, and into which it would be useful for the Commissioners to inquire ?—There are none which immediately occur to me that I could name.

311. (*Dr. Playfair.*) Has the case of the Thorp Meadows, a few miles from Leeds, come to your knowledge ?—I have no information of that case.

312. (*Chairman.*) In these cases have there not been causes at work which might increase the virulence of the disease, such as unhealthy housing of the animals ?—My experience with regard to that is this, that it matters not how animals are housed, or how they are managed, nor what their age, sex, or condition may be; nothing stops this disease; if the germ is introduced the malady spreads.

313. It has been much more prevalent in London than in the country, has it not ?—Yes, it has; but only by attacking a larger number of animals in the same area of space. It has not produced more deaths in London than it has in the country.

314. That is to say, the per-centage has not been greater ?—No.

315. Putting London aside, and dealing with the country cases, have you been able to trace most of the country cases to their origin ?—Most of the original outbreaks in every county can be traced to the Metropolitan Cattle Market.

316. You have been able to trace the origin of the cases in the country unmistakeably to the Metropolitan Market ?—Yes; nearly all the original outbreaks

in the different counties of England are traceable to animals which were bought in the Metropolitan Cattle Market. For instance, outbreaks occurred on three distinct farms in Sussex, which I went to investigate, and it was traceable in every instance to calves bought in Chichester market, which had been previously bought in the Metropolitan Market and taken down to Chichester.

317. Have you been able to trace that those calves had been standing near to cattle which had been condemned by the inspector, or which had the disease?—No; I have been able only to trace that they had been in the Metropolitan Market, where the disease existed, every market day, from animals being sent out of London cowsheds, which were the subjects of the disease. Not only have animals been sent from cowsheds, but from various parts of the country. I can give you an instance which occurred in relation to the county of Kent. A gentleman bought, or rather he commissioned a person to buy for him, a bull, which animal was bought in the Metropolitan Market. This bull introduced the disease among his cows; it then spread to his bullocks, and fearing that he should lose the whole of them he selected a certain number of the bullocks, and sent them back to the Metropolitan Market.

318. Can you give the date of the purchase of the bull, and the date of the death of any cow?—Yes; I had a subsequent interview with the gentleman, but I fear that I have not got here the memorandum which I made of the conversation that then took place. I have no doubt that Mr. Spooner will recollect that the gentleman came up from the country and gave us the full particulars of this case himself.

319. Is there any other country case which has come within your knowledge, and to which you wish to refer?—The outbreak which took place at Portsmouth was due to animals having been sent from the Metropolitan Market, and also the one at Plymouth, as well as that which occurred in the neighbourhood of Market Drayton, in Shropshire. I will look out all the memoranda which relate to these cases and lay them before the Commission.

320. You have referred to the Metropolitan Market, and it would appear that that market has been the real seat of the disease. I presume that there were regulations with regard to inspections in that market, and will you be so good as to state what they were?—There were no special regulations adopted as to the Metropolitan Market until it was well known that the disease had gained great footing in the country, and also in London; and then the Corporation of London gave to Mr. Tegg, the inspector of the market, a number of assistants.

321. It is important to know the date of the first steps that were taken with regard to inspection in the Metropolitan Market?—I think that those steps were not taken more than about a month ago.

322. There were certain measures taken, but were those in your opinion sufficient to detect the presence of Rinderpest on a market day?—Certainly not.

323. Will you state what the measures adopted were?—Merely the attendance of an inspector, that is, one single individual who attends during the whole market day, and walks about among the animals, to detect anything that may give signs of disease.

324. He does not individually inspect every animal in the market?—No. He walks among them, and if he sees an animal that gives evidence of the mouth and foot disease, as an example, he will let it remain. If, however, he saw one that gave evidence of Rinderpest, he would inspect that animal, and have it at once removed. The inspection certainly has been far more critical, more severe, and better carried out during the last six weeks; but until that time the inspector had not sufficient assistants to do the work properly.

325. With a view to the future prevention of this disease, you do not consider the present system of inspection in the market sufficient to detect the signs of the disease?—My opinion as to inspection at fairs and markets is, that it fails in practice to prevent the spread of this disease. No staff of inspectors could inspect the Metropolitan Market, so as to effectually guard the public against buying animals which are the subjects of the disease in its early stages; and nothing could be known of animals which have been herded with the diseased.

326. You have described the ordinary measures that were taken for prevention; what were the extraordinary measures that were adopted on your suggestion?—Not on my suggestion. The only measure, as I understood it, was that of allowing Mr. Tegg some four or five assistants, to go among the animals and report to him whether they saw anything that was suspicious among them.

327. Have the Mayor and Corporation of the City of London jurisdiction over this market?—Entirely so; there is a Markets Committee to which all questions of detail are referred, and of which Mr. Gibbins is chairman.

328. Can you mention the date when these additional inspectors were appointed?—I cannot.

329. Did not the Privy Council lay down some special rules for the inspection of cattle in the Metropolitan Market?—None whatever.

330. Was that left to the Markets Committee?—It was left to the City entirely.

331. How do you believe that the measures taken by the City authorities have worked in the Metropolitan Market?—I have no doubt, that combined with the measures which have been adopted by the Government, they have worked very well; but unless the Privy Council had issued its orders I do not think we should have had much security from the manner in which the animals were inspected in the Metropolitan Market.

332. Can you state the number of the inspectors who are now employed in that market?—I think that besides Mr. Tegg there are four or five assistant inspectors.

333. Have any other means of prevention been resorted to in the market, such as by the use of disinfectants?—Yes. The market has been thoroughly disinfected after each market day; but until the appearance of this disease there was some inattention to the proper cleaning of the market. The Corporation have now insisted upon the market being thoroughly cleansed, and for disinfectants to be used all about the posts and rails in the market.

334. Before the disease broke out you do not consider that the Metropolitan Market was in a very healthy state for the cattle going thither?—I do not think it was in an unhealthy state, but that it was not kept so clean as it might have been; and presuming that we had a contagious disease existing in this country, such disease might have been spread through the medium of the excreta, and so on, in the market. I think there was great liability for the spread of the disease on account of the manner in which the market was kept.

335. (*Mr. Wormald.*) What becomes of the filth in the market; how is that disposed of?—I believe there is a contract made with certain persons to clean the market, but I do not know positively about the disposal of the manure.

336. (*Chairman.*) Do you think that since the Rinderpest broke out the market has been better managed, and that it is in a healthier state?—Decidedly I should say that it has been better managed. I do not say that it is in a healthier state, for there have been a good number of diseased animals sent to the Metropolitan Market on nearly every market day.

337. From the country as well as from the town?—From the town chiefly. There have also been many animals from the country in whose systems the disease was unquestionably incubated.

338. With regard to the transport of cattle before the disease broke out, do you consider that proper precautions were taken, and that the transport of cattle in this country was in a satisfactory state?—

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No; but at the same time I do not think that there was a sufficient amount of mismanagement to be productive of the spread of disease to any extent.

339. Were the trucks, for example, kept in a clean state?—No; far from it, and there was great necessity for them to be kept in a more cleanly condition than they were. But when I look back to the time when we had contagious diseases existing in this country, I can see that there was quite as much disease in Smithfield Market as has existed since the railway system was introduced. I am of course not an advocate for uncleanly trucks, but I do not think that railway trucks have tended much to spread disease in this country.

340. Besides the trucks, there are pens into which the cattle are driven at the railway stations; would the same remark apply to them?—Yes. When, however, we have in the country a disease as contagious as this disease is known to be, and when we are aware that every discharge which comes from an infected animal, from its eyes, its nostrils, or its mouth, that all the excreta and all the feculent matter are charged with morbific matter, we can see at once that there is great necessity for every place being thoroughly disinfected and cleansed down after being occupied by cattle.

341. Do you believe that the measures taken by the railway companies have been effectual since the Government have issued certain regulations?—I think that they have materially tended, with other means, to stop the spread of the disease, and had those measures not been taken the disease would have been diffused to a far greater extent.

342. In what state were the lairs before the disease broke out?—As a rule they were very seldom cleaned out; perhaps once in a fortnight or three weeks. Many were kept in a filthy state from animals continually out and in every day, and there was scarcely an opportunity to thoroughly clean them.

343. Would not that be sufficient to generate disease among them?—It might be sufficient to render animals more susceptible of ordinary affections, but not sufficient to engender a special disease such as Rinderpest or small pox, or any other affection of that kind.

344. Are there any regulations as to the number of cattle which are put into a given area. I mean with regard to overcrowding in the lairs?—I cannot positively answer the question, but I think not. I think they only contain as many animals as they conveniently can for the day.

345. Do you think that they are overcrowded?—There may be temporary overcrowding in any of them, as sometimes a lair which perhaps would accommodate 50 cattle may have this number in it to-day for an hour or two; that may be in the morning or in the evening, while in the other part of the day there may not be more than five or six animals in the same place.

346. With regard to the housing of the cattle, and particularly the cows in London, has that subject ever come under your observation?—I have visited a great many of the cowsheds in London, and I have found, so far as the Rinderpest is concerned, that in very many of them to which objection might be taken as to the number of animals kept in them, the height of the building and the cleanliness observed, the disease has not appeared, while in those which would be called healthy sheds it has appeared, simply arising from the circumstance that it has been introduced into the one and not into the other; for example, in Warwick Lane in the city—the city was the last part of the metropolis to become affected—the cows are kept in a cellar, and the disease has only recently made its appearance there.

347. Has the disease been there?—Yes, since within the last month, but there was none up to that time.

348. Was that cellar a healthy place for cows?—Not in my opinion; but the causes that the animals were exposed to were insufficient to engender a disease of this kind.

349. Without reference to this particular disease, will you be good enough to give your opinion as to the general state of the cowsheds in London?—The cowsheds in London are under the regulations of the vestries, and there are sanitary inspectors appointed by each vestry, who ought not, if they do their duty, to allow the sheds to be badly kept. I believe also that the Inspectors should measure the dimensions of the sheds, and report as to the number of animals that ought to be kept in them.

350. Do they inspect them carefully, and report any that are not kept in a proper state?—They report some, but whether they inspect them all as they ought to do, I think is a matter of doubt.

351. (*Viscount Cranborne.*) Is there any recommendation that you wish to make to the Commission with a view to the action of the Government, and which you think ought to be made at the present time, in addition to what has been already done?—I think that the time is drawing very near, if it has not already arrived, when the markets and the fairs should be suppressed in all the counties in which the disease exists.

352. (*Chairman.*) Has not an Order in Council been made as to that?—A discretionary power has been vested in the magistrates by which they can order a market to be suspended.

353. Does that include the Metropolitan Market?—I think it does not.

354. (*Viscount Cranborne.*) Would your recommendation include the Metropolitan Market?—No; I think that the Metropolitan cannot be dispensed with; but I would have it entirely limited to the sale of cattle for immediate slaughtering.

355. I suppose you would extend that recommendation to the whole kingdom?—Yes.

356. Would you forbid importation?—Certainly not.

357. Would you require the slaughter of all imported animals?—I think the slaughter of all imported animals would be practically tantamount to prohibiting importation.

358. Would you take any measures as to imported animals?—I would make every lot of animals that came out of a country where we know the disease to exist, for instance, from Galicia or Hungary, go into quarantine. The practical effect of that would probably be, that the importers would bring none from those countries; but such a result would scarcely interfere at all with the number of animals that are imported.

359. Do you mean animals coming by sea from those places you have mentioned?—They come across the continent by rail, and are shipped from Holland or Belgium.

360. Could you be always certain of tracing them?—Yes; they carry their own characteristics with them, and it could be easily ascertained whether there were any Hungarian or Galician animals on board the ship; and if not, the importer should be made to declare where they came from.

361. Is there any disease in Austria Proper?—I cannot say, but I think not,

362. (*Dr. Parkes.*) One can see that the general doctrine of the contagion of disease has had great effect upon your mind with reference to the Revel cattle introducing the disease; but can you furnish the Commission with a statement of all the positive instances of contagion which have occurred in this country, giving the precise dates, so as to have an account of the whole?—I do not think that this is possible, according to the returns that we have. I have endeavoured to obtain the most accurate returns, but I have failed to some extent in doing so. I shall be able I hope by the end of the week to give you the amount of loss in the country, and the number of cattle that have escaped which have been exposed to infection. I can give many instances of decided exposure, and the results, but not of all, that have occurred in the country.

363. The impression made upon your mind, I think,

is, that in a vast number of cases the disease has been carried from the Metropolitan Market?—I have no doubt of it; I can give you many instances of that kind.

364. Do you believe that no hygienic conditions whatever affect the Rinderpest; suppose, for example, it is introduced into a stable in a good hygienic condition, and into another not in the same condition, would there be no difference in the two cases?—The disease has shown itself among animals which have been managed as well as they could be; and it has shown itself also among animals that have been as badly managed as they could be. The mortality has been just as great in the one case as in the other.

365. The rapidity of the disease and the mortality have been the same?—Just the same; the progress has been like the smallpox and other diseases of that kind. I saw some animals on Saturday last that were as well fed as they possibly could be, but the disease was making great progress among them.

366. (*Mr. Read.*) What was the effect of the first Order in Council?—I think to spread the disease rather more quickly than it would have been from the Metropolitan Market, as it called on cowkeepers to give notice of the existence of disease.

367. With regard to the system of inspection, you say that it is very inefficient in some of the outports?—The inspection at some of the ports has certainly not been so good as it should have been. I may mention that up to within a very short time there was no properly educated veterinary surgeon who was an inspector at the port of Harwich. The inspector there was what is commonly called a farrier or cowleech. I was at Harwich on one occasion, and I saw this man inspect some animals which had just arrived from Rotterdam; he stood by and merely saw the animals run past him.

368. When that inspection took place was it not as late as 10 or 11 o'clock at night?—It was late in the evening, it was on the occasion of the Essex Agricultural Society meeting at Harwich. I was there with some others; and when it was very nearly dark we went down to the pier, and saw this man "pass" many calves, pigs, and sheep; whether he knew who stood at his elbow or not I do not know, but when he saw us he stopped some of the animals coming across the bridge out of a vessel on to the landing place, and looked at them a little more attentively.

369. Was it not so dark that it would have been difficult to distinguish a bull from a cow?—I do not think it was quite so dark as that. Not more than three months ago the inspector at Newhaven was a butcher—whether the Customs authorities have appointed any other man now, I do not know, but the same imperfect inspection took place there.

370. There are very few, if any, cases of spontaneous outbreaks in the rural districts, I believe?—I do not think there are any. We may not be able to trace all the outbreaks to the introduction of the materies morbi of the disease; but in most of them it can certainly be traced.

371. Take the whole of the eastern counties, is it not very easy there to get at every case in which cattle from the Metropolitan Market have introduced the disease?—Just so.

372. You have referred to one case in Norfolk?—Yes; Mr. Leeds's.

373. Then the North Walsham District is the same?—Yes.

374. And that of South Norfolk?—Yes, the same.

375. In your opinion is it possible for the disease to be spread by means of flies?—I think it just possible that the disease may be spread through the medium of flies, from these insects alighting upon diseased cattle, and then going to other cattle at a short distance from them and alighting upon them. I think it is possible, but not very probable, that the disease may be conveyed in that way.

376. This day fortnight I saw a bullock dying from the Cattle Plague, and I should say that there was around that bullock, hanging in clusters, at least a peck of large bluebottle flies. Is it not possible that they might spread the disease?—Quite so, for the smallest amount almost of morbific matter would propagate the disease, and we can readily see that flies may take up an amount that would be perfectly effective for the purpose. I know that the disease may be spread by various indirect means.

377. When you speak of the Metropolitan Market being more healthy since the introduction of the railway system, would you not attribute that, in a measure, to the more rapid means of transit by railway as compared with the road, and not to the good management of the trucks?—Possibly so. I have never been able to trace any disease in animals as being caught in trucks; that is, not directly in dirty trucks; quick transit may have something to do with it.

378. Take the cattle coming from Norfolk to London, a journey which occupied seven or eight days before the introduction of railways; would they not be more likely to be in a diseased state than they are now at the end of so many hours?—Until 1839, when the so-called mouth and foot disease first appeared in this country, animals suffered no inconvenience so as to produce disease from being driven from any part of England to Smithfield Market; but when the mouth and foot disease appeared, it was found that animals, after being driven from different parts of the country, say from Norfolk, as soon as they came near to London sickened with this disease. I think it is not unlikely that the exertion which they had undergone rendered them more susceptible, and that they were brought more into the focus of the affection by coming near to London. If we look back to a time prior to the year 1839, when these special diseases had no existence here, we should not find that there were diseased cattle in the market from being sent by road from different parts of the country to London.

379. Would they be not more likely to take disease? We used to think that a bullock would shrink four imperial stones on the journey?—Yes; and long exertion would render the animal more susceptible of disease. We have a pretty good proof of that in the fact that if a man had 20 bullocks in Norfolk, and he selected 10 of them to send to the Metropolitan Market,—I am speaking now of the time before railways came into existence,—they would be affected with the mouth and foot disease on coming to the market, while every one of the animals from which they were taken at home would be perfectly sound.

380. Provided railways were properly managed, ought we not to have less disease in the cattle on account of the more rapid transit than in the old days when they travelled so far by road?—I think so.

381. With regard to quarantine for foreign stock, would it not be better to have slaughter-houses at the landing places than any system of quarantine?—Certainly, of the two things, it would be better; no system of quarantine for foreign stock, as a whole, can be practically carried out; but I would nevertheless make use of a limited quarantine as to animals coming from certain countries for the express purpose of preventing their coming at all.

382. (*Mr. Ceely.*) That would be indirect exclusion?—Yes.

383. (*Mr. Read.*) Would it not be better to kill the animals at once?—That might be the preferable plan.

384. (*Mr. Ceely.*) I suppose you do not consider that the disease has been propagated from the Metropolitan Market solely by the animals, but you would attribute some influence I dare say to the exportation of manure at the commencement of the outbreak. I have seen manure sent from cowsheds into the country, and I have known cows' legs to be found among them?—There is no doubt that a good deal of the disease that has appeared in the country has been due to manure which has gone from out of the

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cowsheds, and from knackers' yards, and from the Metropolitan Market. We have not been able to trace in all cases where the manure came from, but there have been many cases in the country which have been traceable to London manure.

385. Not more than a fortnight ago I knew of some manure being sent to Wendover in Buckinghamshire, and a cow's leg was found amongst it ?—Yes ; that is not an isolated case ; there have been several parts of animals found in the London manure.

386. Would not that give rise to spontaneous generation ?—The so-called spontaneous generation ; it is merely transporting the seeds of the disease in another way.

387. (*Professor Spooner.*) Do you not think it probable that the disease may be conveyed by the inspectors themselves and other parties, from attending on diseased animals ?—I have no doubt of it whatever. Disease has often been conveyed by one person going to look at a number of animals, and handling them, and then going off to some healthy animals at a short distance from the place.

388. During the time that this disease has raged in London you are aware that many persons from the country have visited us to inspect diseased cattle. Is it not probable that those persons may go back into the country and take the disease with them, and so infect cattle in their own neighbourhood ?—If a man went from London, and the journey would not occupy more than about half a day, I can understand that he might take the disease with him if he went directly to look at any animals on his return ; but supposing that a man came out of Yorkshire, and returned home late at night, and thoroughly washed himself, then I do not think there would be much risk.

389. Should you not think that such a means of conveying the disease has, in all probability, had an effect in those cases in which the disease has not been traceable to infected animals ?—I have no doubt that if we could ascertain all the circumstances of every outbreak, and get at positive information, we should see quite sufficient to account for it without calling to our assistance spontaneous origin. I look upon it that the germ is indirectly communicated in some manner or other.

390. Referring to the transport of animals by railway, do you not think that if a truck-load of diseased animals were conveyed by railway, and it passed through a country where there were cattle, that the disease might so be communicated ?—By the escape of the feculent matter falling down upon the rails, I can conceive that animals pastured near the railway might receive the disease.

391. You have stood by a line when a truck-load of cattle has passed, and you have no doubt noticed the effluvium which has been left behind ?—Yes, many a time.

392. (*Dr. Playfair*). I think you stated that you thought bad hygienic conditions in the stalls occupied by cattle made them more susceptible to disease, although bad hygienic conditions might not produce disease ?—There is no doubt that animals exposed to debilitating causes of that kind would be more susceptible to disease generally ; but I wish to convey this as my own impression, that no bad hygienic conditions would produce Cattle Plague, and that if the disease were introduced into a shed or on to a farm where such a state of things existed, it would not be more likely to be fatal there than where the opposite state of things existed.

393. Are you not aware that the human plague attacked equally the well-conditioned and the ill-conditioned members of society, that the same measures as to confining the infected were adopted then, and yet that the plague visited us at least 15 times in one century ; but after the hygienic and social condition of the population was improved it no longer entered the kingdom ?—I think if we were more conversant with all the regulations that were brought into force to limit the plague, we should be less inclined to attach much importance to hygienic regulations in arresting its progress.

394. You are of opinion that improved hygienic conditions are not of much importance in regard to cattle ?—No. I think you have misunderstood me. I am a great advocate for improved hygienic conditions as giving security against disease generally ; and all I wish to say is this, that in my opinion, if we have the special germ of Rinderpest introduced into a herd of cattle that are well managed, and into a herd that are badly managed, the disease will be just as fatal and spread just as quickly in the one case as in the other.

395. The germ of the plague may be very often introduced into England with Egyptian cotton ; the germ comes to England, but the improved hygienic conditions prevent its spread. Is it not therefore possible that if the hygienic condition of the cattle were improved the Rinderpest might be made as of little importance with regard to attaching itself to the soil of England as the plague of man now is ?—I do not think that if the Cattle Plague is introduced into this country we shall be able to arrest it by hygienic regulations.

396. Have we not done so as to the human plague? —I cannot answer that question satisfactorily.

397. (*Viscount Cranborne.*) Do you know how far the season of the year and the temperature affect the progress and spread of Rinderpest in the countries where it originates ?— (*Mr. Ernes.*) In the steppes it has very little influence ; but when steppe cattle are travelling, and there is snow on the ground, the malady does not spread so much, on account of the cattle confining themselves to the road, from which they otherwise deviate in search of food.

398. That is so, is it, in Galicia and in the frontier countries ?—That I could not say. I have obtained my information from others, and have not seen it myself ; whether that is the case in Galicia or in Hungary I cannot say.

399. At what season of the year were you there ?—In the month of May. The malady does not spread so fast when they are confined to the road as when they spread on each side of the road to feed ; then they spread the disease very fast.

400. (*Chairman.*) You mean that the disease does not spread so much among other cattle ?—Yes, and the steppe cattle, even when travelling, are not so strongly affected. It seems to be the special privilege of the steppe breed, that they do not suffer to the same extent as other cattle ; for instance, where the steppe cattle would lose from 40 to 50 per cent., the others would lose from 80 to 90 per cent.

401. (*Mr. Read.*) (*To Professor Simonds.*) Do you find that there is any difference when cattle are attacked with the plague, whether they happen to be inhabitants of a London dairy or of a Norfolk marsh ?—I have found no difference practically either in the progress or in the fatality of the disease. It has been just as fatal on the pastures of Norfolk as it has been in the dairies of London.

The witnesses withdrew.

Adjourned till to-morrow at 12 o'clock.

Tuesday, 10th October 1865.

PRESENT :

EARL SPENCER.	MR. READ.
VISCOUNT CRANBORNE.	DR. BENCE JONES.
MR. LOWE.	DR. QUAIN.
DR. LYON PLAYFAIR.	MR. WORMALD.

EARL SPENCER IN THE CHAIR.

Professor GEORGE THOMAS BROWN examined.

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402. (*Chairman.*) Will you state to what college you belong?—I am a member of the Royal Veterinary College. I was for a great many years Professor at Cirencester College, and am now acting as the assistant inspector under Professor Simonds in the Veterinary Department of the Privy Council Office.

403. You state that you are an assistant inspector; will you state how many orders of inspectors are there, and by whom are they appointed?—There are, first, inspectors under the Order in Council, appointed by the Clerk of the Council; secondly, inspectors under the Order in Council, appointed by the magistrates; thirdly, inspectors of fairs and markets appointed by the mayor and corporation; fourthly, inspectors of ports, appointed by the Board of Customs.

404. Are all these veterinary surgeons?—The holders of these appointments may be veterinary surgeons, farriers, or cow doctors, butchers or others, who may be considered competent by the authorities by whom they are appointed.

405. Have you traced many cases of the disease in England where direct contagion could not be discovered?—Yes; I have found a great many instances where animals apparently have been quite isolated, and where notwithstanding they have fallen victims to the malady.

406. Will you state one or two of the most prominent cases?—Some prominent cases occurred in Norwich. Mr. Ireland of Thimblethorpe, in the case mentioned yesterday by Professor Simonds, had six oxen in his own straw yard; the animals were bred by himself, they were never off the farm at all, and those animals were all attacked when I saw them; some of them apparently were doing exceedingly well. I have not heard since whether they recovered or not; there was no doubt about their having the disease. He stated to me that they had never been in contact with any diseased animals, and from the situation of the farm I have no doubt that his statement was correct; but I was able to trace the original outbreak to a certain importation from the Metropolitan Market. Mr. Leeds of Whitwell had bought some Dutch beasts on July the 1st; these animals apparently brought the disease into that part of Norfolk, and from that point we traced it to different distances of three or four miles; but there could not be traced any direct contagion, no direct contact with diseased animals could be proved to have taken place. There are cases in London which I consider still more remarkable.

407. How far is Mr. Leeds's farm from Mr. Ireland's?—Something like three miles. I do not think that there was any disease nearer than a mile and a half in a straight line from Thimblethorpe.

408. Were the sheds near a road?—The straw yard was near a road; but there was another yard by the side of it, through which the animals would have had to pass to reach a gate; the outside of the straw yard was bounded by a wall, but it was tolerably high.

409. (*Viscount Cranborne.*) Did you make any inquiry as to the circumstances attending the first outbreak?—Yes.

410. Had they known of any cattle passing along the road?—In the case of Mr. Ireland they had not known anything of the kind, but it is quite certain that animals had passed along the road, because I traced several cases where diseased animals had been driven to and fro to the common. I ascertained that some animals belonging to small farmers had been driven night and morning along the roads in order to feed them upon the common.

411. Was that close to the shed where these cattle were kept?—They were at some distance, but I merely mention the fact as an illustration of what was going on in the country.

412. Did you know that diseased cattle were passing along the road in this case?—Not in this case; we could not trace anything at all. Mr. Ireland was quite as much at fault as we were; he had no idea of how his cattle became affected.

413. (*Mr. Read.*) Did you hear that these cattle of Mr. Ireland's had ever been to any pound?—No; he stated to me that they had never been off his farm.

414. Did you hear of any other cattle which had been in pound?—No; I did not hear of any.

415. The theory of it in Norfolk is that these cattle went to a pound, and that some horses which had been depastured in a field with some cattle which had died might have conveyed the contagion to the pound. Still you say that it was within a mile and a half?—I think that a mile and a half was about the nearest point, as far as could be ascertained.

416. Had Mr. Ireland, or any of his attendants, been to see diseased cattle?—The attendants did not admit anything of the kind. They would naturally not do so, as they would suppose that some suspicion would attach to them under the circumstances.

417. What is your theory as to the contagion being conveyed by flies?—I think that it is quite possible. I have observed them around the eyes, where there has been a morbid secretion, in great numbers, and I also see that they have the power of penetrating the skin and drawing blood. I think that they might have the power of inoculating the animal, but of course it is merely a conjectural opinion.

418. Is it not possible to have it made a matter of experiment, as a few days ago thousands of flies were seen fastened to every dying bullock?—If they were let loose in an enclosed place where bullocks were, it might be done, particularly if the flies were kept for some hours without food, but it never has been done.

419. (*Mr. Wormald.*) I do not exactly see how by turning a sound bullock into a place where there is a diseased animal, and there are a number of flies which fasten upon the sound animal which becomes affected, you are therefore to suppose that the flies have affected it, inasmuch as it is put into a place where an unsound animal has been?—I understand it to be said that a quantity of flies were to be taken to a sound animal.

420. (*Mr. Read.*) In an unaffected neighbourhood?—Quite so.

421. (*Dr. Jones.*) Have you made every inquiry as to the approximation of a diseased animal within a mile and a half?—Yes; I was running about the district to finish the inquiry, and I travelled 50 miles in a day with a pair of horses, and got back to Norwich at 12 o'clock at night. I made similar inspections in different parts of the country.

422. (*Viscount Cranborne.*) How long were you at this farm?—I think about half an hour.

423. Did you go to Mr. Leeds's farm?—That was

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the second inspection which I made; he gave me all the particulars.

424. It was the same day?—Yes. This case of Mr. Leeds is not a mysterious one. Mr. Leeds of Whitwell bought a lot of Dutch beasts from the Metropolitan Market on July the 1st. On July the 3d the disease appeared among them—all had it. Some of them gave evidence of great disease in the mouth; it was very extraordinary in that respect. Thirteen of these animals died, leaving 13 cases of recovery. Those animals were going on exceedingly well when I saw them, and I understood that they recovered subsequently.

425. (*Mr. Read.*) Can you see any reason for that unaccountable recovery of 50 per cent. in one lot?—No.

426. Thirteen out of 26 lived, I think you said?—Yes; all the animals were Dutch cows, and it has been observed that they do not succumb so readily as English cows do.

427. Out of the 26 animals which Mr. Leeds purchased on Norwich Hill which came from the Metropolitan Market 13 are alive now?—Yes, it is a fact.

428. And it is a most extraordinary fact?—Yes, certainly; those 13 animals all had the disease, I am quite clear about it.

429. (*Mr. Wormald.*) Did not you say that these animals were especially affected in the mouth?—Particularly.

430. Have you at all observed the disease with which cattle are attacked in the mouth?—I have observed the ordinary foot and mouth disease. I have seen some cases which I should not have distinguished from Cattle Plague if the head and mouth had been presented to me, and no other parts. I am speaking now with reference to the mouth, and judging by it alone, there are some cases which I saw last week where if the heads had been sent to me I should have called it Cattle Plague. The common foot and mouth disease is much more severe now than it has been known to be for many years.

431. And it similates this Rinderpest?—In that particular of the excoriation of the palate, which is very unusual in foot and mouth disease, but is very frequent in this disease. Nevertheless, we have had animals die in large numbers perfectly free from any mouth disease.

432. (*Chairman.*) Will you name some other cases which you consider mysterious?—There is the case of a man in the Euston Road having one cow; he was a cabman, and he purchased a cow in order that his wife might keep a small dairy; that animal had been in their possession for three months, and was in a very large well-ventilated shed capable of holding six or seven animals; the cow was in very good condition, and had never been off the premises. The animal was attacked on September the 9th with preliminary symptoms; they were exceedingly slight; it was sent to the college, and on September the 12th it was dead, the disease being suddenly fully developed, and the progress of it being very rapid.

433. Was the stable where the cow was first housed at all near any other cow sheds?—No, not within some 200 or 300 yards; it was quite isolated; it was in a street leading through a gateway 200 yards back.

434. There was no drain communicating from one to the other?—No, certainly not. It was as isolated as any case could possibly be of that kind.

435. And when the cow was removed to the Veterinary College was she placed where the diseased cows or bullocks were?—She was placed in a part set aside for the reception of these animals.

436. (*Viscount Cranborne.*) The whole had disease?—Yes; that cow died three days after she was admitted. The disease was very rapid.

437. (*Chairman.*) Then it is possible that she might have caught the disease at the Veterinary College?—I think not, considering that on the following day she was bad, and died two days afterwards. When I saw her I was satisfied that she had the malady in the early stage. Miss Burdett Coutts' and Lord Granville's cases were not to be traced to any direct contagion.

438. (*Dr. Jones.*) Is it true that no positive contagion has been found in the case of Miss Burdett Coutts' animals?—Not directly by the contact of diseased cattle. I think that there is a way of explaining it by the possibility of other animals, sheep or dogs, which had been with infected beasts, coming in contact with them.

439. Have you any good ground for your conclusion in that case?—Certainly. In Miss Burdett Coutts' case there were 20 head of stock which were kept in the pastures, which are quite private; but I ascertained that some time before the outbreak they had been in the habit of allowing some persons connected with a school in the neighbourhood to place sheep there, these sheep having been some five or six times in the Metropolitan Market. That was all the evidence which we could collect in that case. The cows were feeding in the field next to the sheep, and were separated only by a wire fence. We were compelled to conclude that the cattle had received the contagion from the sheep, or that men who had been in contact with diseased animals had been upon the premises, but that was contradicted, because the premises were strictly private.

440. (*Chairman.*) When did the first case occur among the cows?—The first case occurred on July the 27th. On the 29th one animal died. From that time, at intervals of a few days, the whole stock were attacked, one or two at a time, and unfortunately the whole died, one or two at a time, or were killed; four or five were killed when I first inspected them.

441. Can you give the date when those sheep were in the Metropolitan Market?—I do not know the dates when they were there, but it was stated that they had been there five or six times and not sold, and that they had been driven back; in fact they had been in the habit of allowing these people to place their sheep there in a field which was only separated by an open wire fence.

442. It was within a fortnight of the seizure of these cows that these sheep had been in the Metropolitan Market?—They had been in the habit of going every market day, and up to the time when the animals were attacked the sheep were still there.

443. (*Mr. Read.*) If they had been at the Metropolitan Market you would think it quite probable that the sheep communicated the germ of the disease to the cows?—It is quite probable. There are many outbreaks which we can trace in no other way except that sheep in the Metropolitan Market had been brought in contact with cattle, and the cattle subsequently suffered from the Cattle Plague.

444. (*Dr. Jones.*) The sheep having no signs of any disease?—The sheep having no indication of any disease whatever, and the same thing of course would apply to men. It is asserted by continental authorities that even dogs have been known to carry the infection.

445. (*Dr. Playfair.*) Have you not an instance at the Veterinary College of a sheep which remained in health having affected a calf with which it was put in contact?—I do not think that a good case; the sheep was placed with a diseased cow, and was returned to the shed; the calf was taken ill three or four days afterwards, and died. It is doubtful whether the infection was received from the sheep or from the diseased cattle around.

446. (*Viscount Cranborne.*) In many of these cases did you inquire into the source from which the water came which the animals drank?—Yes.

447. And it was connected with the cases where the disease had broken out?—In Lord Granville's case it certainly was not connected with it. The water came many miles through iron pipes.

448. I suppose that the iron pipes would not destroy the infection?—No; but one could not suppose that the virus would filter through the soil.

449. In any case did the animals drink running water at a river, or was it generally from wells or ponds ?—It was generally from wells or ponds, except in the marshes, where there are dykes.

450. (*Mr. Read.*) In the case of that fortunate cow at the College were any precautionary measures taken ?—None whatever. The calf resisted the infection for about two months and then died, but the cow has survived.

451. The cow is not a steppe cow ?—No.

452. (*Chairman.*) Did you know of diseased cattle being near Miss Coutts' cattle before they took the disease ?—There were a great number of them about three quarters of a mile away. Miss Coutts explained to me that the disease began a short time after a thunderstorm when the wind blew from that direction. Her theory was that the disease began in that manner.

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453. What is your opinion upon that point ?—I prefer the sheep to the wind, though I do not see why the atmosphere should not convey the disease to a limited distance.

454. (*Mr. Wormald.*) In Miss Burdett Coutts' pastures are there opportunities for the cows to avail themselves of perpetual baths, as we know that they do in hot weather, or can they only drink from tanks ?—They can only drink from tanks.

The witness withdrew.

Professor GERLACH examined.*

Professor Gerlach.

455. (*Chairman.*) Professor Gerlach, you are, I think, a professor of veterinary science in Hanover; will you tell us what you have seen of the disease which now prevails in this country ? Have you seen it in any part of Prussia ?—I am a professor in Hanover, and Director of the Veterinary College there. I have seen the Cattle Plague in Hungary, and lately in Holland. In Prussia it sometimes occurs, but only in the border provinces, and it is soon extinguished there. I have lately been in Holland, in Schiedam. I was sent thither by the Hanoverian Government to acquaint myself with the disease and the remedies employed. Its first appearance in Holland was in the beginning of August. A tradesman in Rotterdam bought cattle, and sent them to market in England. He did not succeed in selling them; he kept them for some eight days, and sent them again to market. Not being able to dispose of them, he took them back to Rotterdam. Being a tradesman, and engaging in this transaction as a speculation only, he had no lairs, and he sent them into the country to a place called Kethel near Schiedam; they fell sick within a few days. The nature of the disease was at first mistaken. The diseased cows were partly sent to Rotterdam to the market, and there slaughtered; others died. The farmer who took charge of these cattle had also a herd of his own. Those cattle which he received were kept in a lair, his own were feeding in a meadow 1,000 paces off, and among the herd which was feeding at this distance the complaint broke out, without any contact with the cattle in the lair. The herd so infected was pastured in a long meadow which was in contact on both sides with many other strips of meadow abutting on it, each of which contained cattle, so that by this means more than 20 herds of cattle were infected. The market was being held in Rotterdam at the time when this disease broke out, and from this market the disease appeared to have spread through the whole province of South Holland.

456. (*Dr. Playfair.*) Is it very extensively spread through Holland at present ?—In South Holland it has extended so widely that it has been found necessary to close, with the exception of a few small districts, the whole of South Holland, taking the natural boundaries, canals, rivers, and so on, for the purpose of extinguishing the disease.

457. Has it not passed into North Holland at all ?—The other Dutch provinces, not relying upon the precautions taken for South Holland, have adopted or are adopting like precautions for themselves. North Holland has surrounded itself by a military cordon. Some week or ten days ago, when I last heard, the provinces of Utrecht and Guelderland were considering the same thing. The effect of these measures has been that the disease has only in three cases overstepped the frontier of South Holland, once in Amsterdam, and twice in other places which I do not now remember; and in these three places it has been extinguished by promptly closing up the place where it occurred.

458. Did they slaughter all the cattle in the infected districts ?—The measures adopted with respect to these districts have not been sufficiently stringent. The Government has left it to the communes or localities and to the authorities of those localities to carry out what measures are thought expedient. They have established a Commission in Schiedam, consisting of some veterinary surgeons, and have as far as possible sent veterinary surgeons through the country to be of use when called in; but the local authorities are sometimes lax and sometimes active; sometimes they let the animals live or die, as it may happen, and many of these diseased animals are exported, and in many cases have been exported to England.

459. To the London market ?—To the London market.

460. (*Mr. Read.*) Is there any prohibition of exportation ?—Exportation by sea is not forbidden. Exportation to other Dutch provinces is prevented; but within the district so shut up the cattle are allowed to be sold or slaughtered, and to be exported abroad. They are only when slaughtered examined by a local authority, who decides whether they are fit for food or not.

461. Has Belgium taken any precautions against the disease ?—I have not been in Belgium, so that I cannot say what has been done there. I intend to return by Belgium.

462. (*Mr. Lowe.*) Speaking of the disease in this country, have you seen the nature of the disease itself, and what would you suggest to us under the circumstances under which we find ourselves ? I do not know whether you have been long in England, or elsewhere than in London ?—I have been now but five days in London and its outskirts. I have been several times before in England. I was here in the Exhibition year. The scientific principle is, first, that in Germany and in England the disease commences and propagates itself only by contagion, and in the second place that it can only be got rid of by absolutely preventing the extension of this contagion—by preventing the contagious matter from spreading. This contagious matter is so volatile and so concentrated that there is nothing else to be compared to it. In order to extinguish it, therefore, it is necessary that the diseased cattle and their excretions should be absolutely shut off from the healthy. Where the district is small there should be a total inclosure of the district itself. It is necessary that in the places where these measures are employed the disease itself should be put an end to as rapidly as possible, because if they are long continued it is found impracticable to carry them out strictly. With precautions of this nature such a relaxation comes inevitably in time. For this purpose, for putting an end to the disease where it exists, there are three means. First, the slaughtering of the cattle; but this only where by destroying the cattle you can destroy also the pest. When it is confined to a small space, as to a single herd, and that not of very large extent, the slaughtering of the cattle is the best and

* Professor Gerlach, not understanding English, was examined through the Secretary.

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the most effectual means. In the second place, those cattle which have not yet caught the disease should be immediately sold for slaughtering; The meat of the cattle so sold may be eaten unconditionally, experience having shown that the flesh even of diseased cattle is not directly injurious to health.

463. (*Viscount Cranborne.*) What is the meaning of "directly?"—If the meat has become corrupted it is of course injurious to health; but the mere fact of disease, as far as we have been able to observe, has never produced injurious effects at all upon the human subject.

464. (*Dr. Playfair.*) In all these remarks you refer to cooked flesh?—Yes. Thirdly, no cattle should be allowed to be exported from the place in question. Or exportation may be permitted only on railways, and perhaps accompanied by inspectors, and only to places where the cattle will be sold for the purposes of slaughter.

465. (*Viscount Cranborne.*) Do you consider that inspectors can always tell whether an animal is in a condition to carry infection or not?—I think that they can.

466. (*Mr. Lowe.*) What is the use of shutting up particular districts if you would allow cattle to be sent out of them for the purpose of being sent to market and slaughtered there?—The most complete and effectual measure, no doubt, is to close completely the infected district, and to slaughter the animals which are there; but I am convinced that the transport of animals reported sound, under proper control, along the great railways to markets where they would be sold for immediate slaughtering, may take place without danger. A further means of shortening the period for destroying the Plague in an infected district is inoculation. Experience shows that in many cases as many animals die which have taken the disease by inoculation as those which have taken it by contagion, but it is generally much milder, and the proportion is never greater. The effect at the same time is to accelerate the process of the disease, so that a district through which the disease would take a quarter of a year, or perhaps half a year to travel, receives the disease completely in eight days, and the loss is not greater, and generally much less.

467. (*Chairman.*) Is inoculation practised to any extent in Prussia?—The disease has never been allowed to extend so far as to render this advisable. Where the district is small the disease can be more readily extinguished by more violent measures, by absolutely closing the district, and slaughtering the animals. Inoculation is useful in the case of a large district where such wholesale slaughter would be perfectly impossible.

468. (*Dr. Playfair.*) Is inoculation practised in Russia?—Inoculation was practised on a considerable scale formerly in Germany and Denmark in the beginning of this century and in the last century, and it has been practised lately in Russia to a considerable extent, with good results. It is at present contemplated to introduce inoculation into the steppes, and to inoculate all the cattle.

469. (*Viscount Cranborne.*) Has that received any approbation from the Russian Government?—It is a scheme suggested by Professor Jessen, a Professor at Dorpat, and the Government has given its sanction to its being introduced within several districts. The measures which I have mentioned are the only measures that we know of by which the disease can be extirpated.

470. (*Mr. Read.*) Has the disease been known to exist in sheep on the Continent?—It has been observed in Hungary and in Austria that the Rinderpest attacks sheep as well as cattle. The same thing has been observed in Italy two years ago, and in Sardinia, that it attacks both sheep and goats. The susceptibility of sheep is much less, however, than that of cattle, so that sheep often escape the effect of contact when cattle would not. It is also usual for the pest to be milder in the case of sheep than it is in the case of cattle. I observed when I was over in Schiedam that some sheep were ill, but it had not been observed by the Commissioner there. I was so much struck with this that I requested the Commissioner to allow me to inoculate, and I did inoculate some sheep, and I observed that they all took it mildly.

471. (*Dr. Playfair.*) Have you done the reverse; have you inoculated cattle from sheep?—I have not had time as yet to inoculate cattle back again from sheep; but it has been observed in former times that the cattle do take the disease from sheep by inoculation; it, however, is not so easily taken by them from sheep as by inoculation from cattle.

472. Is it known to be milder when the disease has been communicated from sheep to cattle?—Observation has not proceeded so far. It is only ascertained that cattle can take the disease from sheep, but whether the infectious matter becomes milder in its operation, by passing through the sheep, has not yet been ascertained.

473. What matter do they use for inoculation?—Either the running from the nose, or the running from the eyes, or the saliva: never blood.

474. Do they ever use the excrement?—It is known to be contagious; but I do not know whether the experiment of inoculation with it has been made.

475. You have told us what you would advise in this country; will you be good enough to tell us precisely what the measures taken in Prussia are? Have you yourself personally seen those measures applied?—I have not; but I am well acquainted with them, for I myself was one of those who prepared a scheme for them in Berlin. The locality where the disease exists is immediately closed up, and the cattle in it are slaughtered, if they are not too numerous: there is a maximum number fixed by law; the limit is 10 or 12, but that limit is not observed, provided the herd be not too great; supposing it to be 20 or 30 only, the whole are slaughtered.

476. Supposing the number of the cattle to exceed the limit, what is the extent of the cordon which is drawn round them?—The whole district where the disease is found to exist is so closed without regard to its extent.

477. Is it an administrative division?—That is regulated by the judgment of persons who understand the subject, and care is taken not to make the district so closed larger than is absolutely necessary.

478. Can you state the largest area that has ever, within your experience, been treated in this manner; a whole province for instance?—Since the close of the war in 1815 no such district so large as the whole of a province has been so closed; but districts of considerable extent, such as of several German miles square, have been closed; it has not been found necessary to go further.

479. Will you state to the Commissioners how this closing of a district is carried out; is it with the aid of the troops, or by the police?—When the danger is great it is done by the help of troops, but in ordinary cases it is done by placing watchmen on the high roads and principal communications, inspectors appointed for the purpose in the chief towns or places seeing that the proper measures are carried out. In ordinary cases it is not usual to kill all the cattle; when the herds are very numerous it is usual to kill only those that are diseased, and not those that are sound. The ordinary period of incubation is seven days. When a period of two or three weeks elapses without any outbreak of disease, the danger is deemed to be at an end; every place, such as the stalls and so forth, is disinfected, and the district is then thrown open; the period of incubation is generally from five to seven days, though in rare cases it may be more.

480. Have you personally seen so few days' elapse as from five to seven days?—Yes, I have.

481. Is the district so shut in that there is not any exportation of cattle, even for slaughter?—In Prussia it is absolute; no cattle are either exported or imported; they are not allowed to be imported, because the importation of fresh cattle extends the disease,

and the fresh cattle take it, and it so prolongs the evil.

482. Does the Government, or does the province, pay compensation to the owners for the beasts that are killed?—The province, not the State, pays compensation for healthy beasts that are killed in order to arrest the progress of the disease; it pays for the healthy animals, but it does not pay for those that are slaughtered being diseased.

483. Are those measures always effectual?—Always; in a few weeks or two months at the utmost the plague disappears.

484. So effectual that the plague never travels from the eastern parts of the kingdom to the western parts of the kingdom?—Since the war with France it has never appeared in Brandenburg. When it has broken out in Poland it sometimes appears in Posen, in Silesia, and East Prussia, but it has never advanced as far as Brandenburg.

485. Is it your opinion that this disease is always propagated by contagion; have you ever heard of its having broken out spontaneously?—Never; the disease has always been propagated by contagion alone.

486. Have those methods which you have described of putting an end to the disease been long in practice in Prussia?—Yes, they have been put in practice from time to time, during the whole century, ever since the war which ended in 1815.

487. (*Viscount Cranborne.*) How do they induce the farmers to give notice of the fact that the disease has broken out among their cattle?—Along the whole Russian frontier there is a strict quarantine as regards the steppe cattle, a species well known, and they are not allowed to pass the frontier without undergoing the quarantine of 21 days; if a single steppe oxen passes the frontier, even in a large herd, it is stopped and sent back to undergo quarantine.

488. (*Dr. Playfair.*) Is that regulation carried on with all Russian cattle, or only with the steppe cattle?—It is not practised with regard to all. If disease exists in the border provinces of Russia, then quarantine is maintained for all cattle, whether steppe cattle or not.

489. (*Viscount Cranborne.*) But I wish to know what means are taken to discover whether the disease has broken out or not?—As soon as any outbreak of the disease is heard of, the strictest investigation is made; in some cases by a legal proceeding, and in other cases without a legal proceeding, and all persons having any knowledge of the matter, the owners and herdsmen, and others, are strictly examined, in order to find out the manner in which the plague has been introduced.

490. (*Dr. Playfair.*) Is any severe punishment inflicted upon a man who purposely conceals the disease?—If it is found out that he has kept it secret, then he is severely punished; but the general feeling of the country is such that it is always told. In Austria the disease is very much more frequent than it is in Prussia; but in every individual case where it has broken out in Austria, it has been traced to the steppe cattle.

491. (*Chairman.*) Have they not the same regulations in Austria as they have in Prussia?—Exactly; the reason that the outbreaks are more numerous in Austria is that they import more; but the regulations are exactly the same.

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492. (*Viscount Cranborne.*) Is the quarantine of 21 days not always effectual?—Cattle are smuggled across sometimes.

493. (*Dr. Playfair.*) Are those measures which you have mentioned extended to men attendant upon the cattle as well as to the cattle themselves?—The cattle are strictly prohibited from quitting the district, and more recently sheep have been also so prevented; and the herdsmen, who are attending upon the cattle, are not allowed to go out to the other districts; other people are.

494. Are those measures willingly assented to by the farmers and peasants of the country?—They are; and the best safeguard is generally found in the precautions which are taken voluntarily in the neighbourhood itself, and even in the districts so closed up. It has sometimes been known that individuals have, by strictly shutting up their own farms, preserved their own cattle within the cordon from any infection.

495. What are the disinfecting means which they rely upon?—First, they rely upon thorough purification with soap and water; secondly, they use chloride of gas to get at all the corners of the stalls, and they also use chloride of lime to disinfect the other parts. Then, with regard to the dresses of the men who are employed, woollen and other similar materials are put into an oven and heated to about the temperature of boiling water.

496. Will you state what they do with the hides?—The hides of the diseased animals are slashed and then buried; the straw and the litter are all burned; they do not attempt to disinfect them.

497. (*Chairman.*) Is the spread of the disease greater in hot weather than in cold weather?—It is worse in cold and in wet weather, and better in warm and dry weather.

498. Are the cattle housed properly in the cold weather?—The cattle are all housed; but they have not so much fresh air as if they were in the fields.

499. (*Dr. Quain.*) Under what circumstances are the hides preserved for use, or made use of?—There is no danger if the hides are taken when they are perfectly dried, and carried straight to the curriers; there is then no danger; but if they are carried about wet and damp, there might be some risk; they might be carried freely anywhere when they are once properly dried, and if they are to be carried far it is a matter of prudence that they should be so dried.

500. (*Mr. Read.*) Have you heard or known of the existence of Rinderpest at the present time in any parts of the Continent except South Holland?—I know of no part of the Continent where it now exists, except in Holland, Belgium, and Hungary.

501. (*Dr. Playfair.*) Are you a medical man, as well as a veterinary surgeon?—Yes, I am.

502. Is it your opinion that this plague has solely originated with the steppe cattle?—Solely.

503. When you speak of the steppes, do you mean the steppes of Podolia and of the Ukraine?—I was referring, not to Russia in Europe, but to the Asiatic steppes; there, as far as we can hear, there is always more or less of it.

The witness withdrew.

Mr. JOHN HÖNCK examined.

Mr. J. Hönck.

504. (*Chairman.*) I believe you deal in cattle largely?—I sell on commission in the Metropolitan Market.

505. Do you send, yourself, for cattle from abroad to come to England?—No, not generally; the cattle that come from abroad come in consignments by various parties to us, and they are delivered in consignments of from one to 100 or 150.

506. You do not yourself order cattle to come from any foreign port?—Not generally; I have done so, but that is not the usual course of business.

507. Do you carry on business alone, or are you connected with any other gentlemen?—I have a partner.

508. Will you be good enough to state who your partners are?—Mr. E. Mertens.

509. Are you in partnership with Mr. Baker?—No.

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510. You constantly have, I suppose, foreign cattle consigned to you ?—Yes.

511. Have you often had Russian cattle consigned to you ?—No.

512. Are you acquainted with the case which has been talked about a good deal, called the Revel case ?—Yes.

513. Some cattle were consigned to you ?—Some cattle were consigned to me from Revel in the month of May last.

514. By whom were they consigned to you ?—They were consigned by Messrs. Clayhills and Son of Revel.

515. Will you state what occurred with regard to those cattle ?—I will. Last summer I became acquainted with an individual of the name of Burchell, and he stated that he believed there was some good to be done from Russia, and that he was going out there. I said, "Very well." Then he said, "I have "not the means to carry on the trade myself, but if I "find that things are promising, perhaps you will "assist me to import cattle from that place." I said, "If you go and see I will hear what your report is "first." He went, and came back again in about October, I think it was, September or October, and his representations were of such an extraordinary character as to the cattle that they had in those districts, and he made out the business in prospect to be so profitable, that a friend of mine, Mr. Baker, and myself were induced to come forward to carry out the contract which he represented he had made with the landowners in Esthland. That is how the business was first introduced to me.

516. Will you state what steps you took to carry out this arrangement ?—He then stated that it would be necessary to lodge 1,000*l.* in the hands of Messrs. Robinson and Fleming here as a guarantee that the contract should be carried out ; but as I did not know anything about the parties, I was unwilling to part with my money before I had a full guarantee that they were respectable and responsible persons, and I did not do so. He said, "It will not matter if I go "back again, the persons will be quite satisfied with "my being there, and they will be equally inclined "to deliver the cattle when the spring comes." So he went back again, and I supposed that everything was going on all right, and that the cattle were coming in such splendid condition as he represented them to be in. From the notice I received that the cattle were ready, I sent a steamer over called the "Tonning" to Revel, in the month of May last. She started from London on about the 9th or 10th of the month, and arrived there on the 16th or 17th of May.

517. Had this vessel been previously engaged in the cattle trade ?—Yes, continually, she was built for the cattle trade, and we are always bringing cattle by her. She arrived at Revel on the 16th or 17th, and she left again on the 23d, with 321 oxen and 330 sheep ; these cattle were received by this Mr. Burchell who was out there at the time.

518. Can you state how these cattle were collected ?—They were collected in the neighbourhood of Revel from the different landed proprietors in Esthonia, within I suppose about 100 miles of the place.

519. Did they all come from Esthonia ?—Yes, all of them.

520. Did none of them come from St. Petersburg ?—No, not that I am aware of, or ever heard of, and in fact I am positive that there were none which came from St. Petersburg.

521. What class of cattle were they ?—They were cattle which had been worked, and they were rather in a low condition ; but so far as I could judge and see they were very sound indeed. I never saw more sound cattle in my life from anywhere.

522. Were there any from Courland ?—Not that I am aware of. I had rather short notice, or else I could have been prepared with documents, and could have answered you fully upon all these questions. I can give you the data, if you please, later.

523. It is very important, if you will be good enough to do so ?—I do not believe that there were any except from Esthonia.

524. Were all the cattle in a healthy condition when they were put on board the vessel ?—I believe so, fully, because they were very healthy when I saw them when they were landed here.

525. Where did the sheep come from ?—I believe they all came from that district.

526. When they left the port were they inspected by any Government officer belonging to Russia ?—I do not think so.

527. After leaving the port did they touch anywhere on their road home ?—The vessel touched at Copenhagen.

528. For what purpose did she touch there ?—To take in water ; and there was also an order sent by our brokers that if they could ship 40 more cattle at Copenhagen without delay they were to do so, because there had been an application of that sort to ship cattle at Copenhagen for London.

529. Did they do so ?—No ; they did not get any cattle from Copenhagen.

530. Were any orders sent to Copenhagen with regard to the destination of the "Tonning ?"—Yes ; when the cargo was first ordered she was ordered to bring the cattle to Lowesfoft, but afterwards it was altered to Hull, because I was so utterly in the dark about the quality of the cattle, as to what they were, and I received one or two telegrams from Mr. Burchell which I could not make out, to this effect : he said that the landed proprietors were cheating him, and that the cattle were in a very lean condition and quality, and that induced me to send them to Hull, partly because I thought that in the northern districts there would be a better market for lean cattle, and also inasmuch as I did not know anything at all about whether these cattle on the voyage, as they often do, might not get the foot and mouth disease, for in Hull they have never taken any notice of that, but in London and Lowestoft they are very particular, and they will not admit any cattle which have the foot and mouth disease.

531. In using the word "they" do you mean the veterinary inspectors appointed by the Customs ?—Yes.

532. They are more lax at Hull, are they ?—Yes, they are, in regard to the foot and mouth complaint. We have always had them passed coming from Hamburgh with the foot and mouth disease at Hull, whereas in London they would never pass one head.

533. Were any of the animals sick on their passage to Hull ?—I have heard that one of them was. Mr. Burchell related that it was so, but that is not at all an uncommon occurrence ; they often die on the voyage without anything at all being the matter with them when shipped.

534. The animal that was sick did not die ?—No.

535. On their arrival at Hull what became of these cattle ?—On their arrival at Hull I put them in the hands of a Mr. Coulson, and he sold 106 of them, to the best of my recollection, there, to go either to Derby, I think it was to Derby, or to Leeds.

536. (*Dr. Playfair.*) Did they not go to Manchester ?—No ; I do not think they went to Manchester. Mr. Coulson sold 106 of them, and 40 were taken by another gentleman, Mr. Hickman, to Manchester, and they were sold there.

537. Mr. Coulson sold 106 for you ; what became of them ?—That I cannot say, but they were sold to dealers.

538. They were sold to Mr. Lambert, were they not ?—I believe they were sold to Dickenson and Derby.

539. (*Chairman.*) You are now speaking of the 106 ?—Yes.

540. And Mr. Hickman bought 20 or 40 others ?—Yes ; he took 40 to sell at Manchester, and he sold them at Manchester.

541. For what purpose were those animals sold,

for slaughtering or for grazing ?—I believe they were all sold for slaughtering.

542. Have you been able to trace any of those animals since they were sold ?—No ; I have never heard anything more of them at all.

543. What became of the remaining 175 ?—The 175 came to London, and they were sold on the Thursday following, after they had arrived here on the Tuesday night.

544. What was the date of their arrival at Hull ?—They arrived on the 29th of May.

545. On what day were the 146 sold ?—On the 30th.

546. Were they sold from the ship, or did they go to any lairs ?—I am not sure whether they were not sold on the same day when they were landed.

547. When did the 175 arrive in London ?—I suppose it must have been on the following day.

548. On the 31st of May ?—Yes.

549. Where did they go to in London ?—They went to my own lairs in York Road, close adjoining the Cattle Market.

550. What became of the 175 ?—They were sold for killing, excepting the 20, which Mr. Baker sent on the same day, no, on the following day, when they arrived, Wednesday, to Gosport.

551. The 20 were sold on the same day as the rest ?—On the day before the market.

552. What was the date of Thursday ?—The 2d of June.

553. The 20 were sold on the 1st of June, and the remainder were sold on the 2d of June ?—I am not quite certain as to the date, but it was on a Thursday, and those 20 were sent down on the Wednesday, the day previous to the market.

554. Who purchased those 155 animals ?—A variety of butchers in the metropolis.

555. Do you know the names of the purchasers ?—I remember several of them, but I sent to Professor Simonds a whole list of them.

556. Will you look at that list (*handing the same to the witness*), and see whether it is correct ?—Yes, it is perfectly correct.

557. What became of those animals ; were they all slaughtered ?—Yes, they were all slaughtered immediately.

558. Did you ever afterwards trace them individually or in lots ?—No. I merely asked people the question whether they found them all sound and right, and I received an assenting answer in every case.

559. Did you see all the oxen ?—Yes, I saw them all.

560. Did they appear to you to be in a healthy condition ?—They were old-worked oxen, and they are sure to be healthy, and if any cattle can stand a journey it is the old ones, they can stand a journey better than the others.

561. What became of the sheep ?—They were also sold by Mr. Coulson to some parties, I believe Mr. Dickenson was one ; they were sold at Hull.

562. They were all sold by Mr. Coulson at Hull ?

563. For what purposes ?—For killing purposes.

564. Do you know where they went ?—I cannot say.

565. Are you in the habit, after a vessel has brought a cargo of cattle to England, of using disinfectants ?—Always ; we use the chloride of lime very freely on board.

566. Previously to the outbreak of Rinderpest in England was it your custom to do so ?—Yes ; but not so much as since that, I believe, because the supervision of the Customs authorities is very strict, and they would compel any shipowner to do it who did not do so.

567. Would they act in the same way at Hull as in London ?—I have no doubt they would.

568. Have you used the "Tonning" since she brought in this cargo ?—Yes, every week.

569. (*Dr. Quain.*) And the week following ?—Yes.

570. (*Chairman.*) When did she start on her next trip after coming to Hull with these cattle ?—I think almost immediately after she came with a cargo from Revel ; she came round to London, and there were certain repairs done to the engine, and after that she started for Tonning.

571. How soon after her arrival at Hull did she start on this fresh trip ?—I think within a week, but I cannot speak positively.

572. Did she return immediately with cattle from Tonning ?—Yes, immediately.

573. (*Mr. Read.*) What was the average price of these cattle ?—As nearly as possible they made 12*l.* each, or between 11*l.* 10*s.* and 12*l.* each.

574. How old were they ; you say that they were old cattle ?—I should judge that they were six or seven or eight years old ; not less than six years old, certainly.

575. What colour were they ?—All colours ; they were black, and black and white, and red and white.

576. Had you ever seen any cattle like that before ?—Yes, I had.

577. Constantly ?—Not often ; there never had been any direct from that part before. I believe there had been a few imported by way of Lubeck some years ago.

578. You have not seen any of them lately ?—No, not lately.

579. You are no doubt accustomed to see all sorts of foreign cattle ; do you know whether any cattle are sent to England from Austria or Hungary ?—Yes, large quantities are sent every week.

580. From Hungary ?—Yes.

581. (*Dr. Playfair.*) Every week ?—It is rather difficult to define where they come from, but we call them the Hungarian breed ; they are a kind of white ; all the cattle have large horns.

582. (*Viscount Cranborne.*) With black hair under the belly ?—No ; these are white entirely, a kind of grey colour.

583. (*Mr. Read.*) In your opinion are the foreign cattle which are imported as healthy as our own ?—I think so ; and in fact the examination at the waterside by the Customs authorities is so strict that it is impossible to bring diseased cattle in ; in fact the other day for one single animal the whole of a cargo was stopped. It has been so in the past also. The surgeons have been very rigorous in their duty.

584. What is the average age of the cattle that are imported ; I do not mean from Holland, but say a district as far off as Austria or Germany ?—I should say that they were between four and five years old.

585. You do not receive small animals from those districts ?—No.

586. The young foreign stock comes mostly from Holland ?—Yes.

587. Is there not a very considerable number of cattle for slaughtering purposes imported from Holland and sold in the Metropolitan Market at different times in the year ?—This year there have been comparatively very few, but in the last year there was an enormous quantity every week.

588. Of your own knowledge you are not aware that these Dutch cattle are particularly liable to pleuro-pneumonia when they arrive in this country ?—Not more so than other animals.

589. You do not know that it is so ?—No ; I should be very cautious about it ; but I should say that those young cattle are more subject to pleuro-pneumonia than other cattle after having gone through the sea voyage.

590. (*Dr. Quain.*) Is Mr. Burchell a person who is accustomed to deal in cattle, or can he be considered a judge of the health and condition of cattle ; is it possible that he could have bought sickly animals or steppe cattle ?—He must have known it if there had been any disease ; he was there all the winter, and he wrote various letters to me about the prospect of the trade, and he must have mentioned it if there had been any disease in the country.

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591. Do you think his knowledge was such that it would have prevented him from buying any diseased cattle ?—Decidedly.

592. Are you acquainted with all the particulars of what occurred at Revel when these cattle were purchased ?—Yes ; I think so.

593. Do you believe that they might have consisted of two sets of cattle, one set consisting of only 13 selected from a particular herd, of which the rest were rejected, and the others obtained from a totally different source ?—I believe there were some of them found to be too low in condition which he objected to on that ground, because he was afraid that when he came here with those cattle I should find great fault with him, and not without reason, after the representations he had made.

594. Have you any reason to suppose that those animals that were low in condition came from a different source, and were not of the same character as the Esthonian cattle ?—No ; these cattle all came out of Esthonia. I saw a gentleman who came from that district, and he told me that they all came out of Esthonia ; they were collected there from the various landed proprietors.

595. Are you aware that any of the cattle in that transaction were killed before the others were shipped from Revel ?—One I believe was, because it had broken its back ; it was lame.

596. Are you quite certain that it was an accident ?—Yes ; I think so. At least I have Baron Girard's letter for it.

597. Did it appear that more than one of them was killed ?—I never heard of any more.

598. (*Dr. Playfair.*) Have any representations been made to you by the purchasers at Hull that the cattle were in a bad state ?—None whatever. I never heard anything more about them.

599. With regard to those that were sent down to Gosport, was it ever represented to you that they had introduced the disease amongst the cattle at Gosport ?—No ; I never heard anything about them. They were inspected by the Government inspectors, and of course it did not concern me, inasmuch as I sold them to Mr. Baker, and, therefore, I was not likely to hear anything more about them.

600. You stated, I think, that one animal being ill in the passage across is not at all an uncommon thing ?—Not at all ; we have them die often, although they may have been perfectly healthy when they came on board, and, after six days' journey, it was only wonderful to me that they all arrived alive. I will guarantee that if they had not been such old cattle they would not have come over alive.

601. (*Viscount Cranborne.*) Can you give the Commission any idea of the average number of deaths which take place on a journey of that kind ?—Perhaps the best guide that I can adopt is the insurance. We effect an insurance upon cattle which come from Schleswig and Holstein for one and a half per cent., which is very small, and the cattle are sent all through the season, including the summer and winter months ; the cattle are insured for the whole season, although in the autumn the risk is of course much greater, it would be then 3 or 4 per cent.

602. (*Dr. Playfair.*) You stated that the inspectors have been very careful since the outbreak of the plague. Are you aware that Dutch cattle have been imported with the plague upon them ?—I have heard of one animal in a cargo that was detected here, and consequently the whole cargo was detained and slaughtered.

603. Have you never heard that more were detained ?—No.

604. (*Chairman.*) I think you stated, that when these cattle came over, they were in an exceedingly lean state ; how was it that they happened to be purchased by butchers in that state ?—I will explain that ; they were slight of meat, as we call it, although they might be tolerably well fattened, yet from their age the meat had all disappeared on their backs ; when they get old they get slight of meat, and that is the case with most cattle.

605. (*Dr. Playfair.*) Does the fat remain ?—Yes, the internal fat.

606. (*Chairman.*) Did the whole lot consist of old cattle, with no young cattle among them ?—There were very few. I did not see above two or three young ones at all that were not above four years old.

607. They were not adapted for grazing ?—No.

608. (*Dr. Playfair.*) Do you agree with other persons in thinking that that herd of cattle brought the disease into the Cattle Market in London ?—I am quite certain in my own mind that they did not, from what I have seen of them, it may have been brought from other districts—from the south ; but it could not have been, according to my idea, brought in by that cargo.

609. Where from in the south might it have been brought ?—By the cattle that we get from Hungary and Podolia, and those parts.

610. To what ports do they come ?—They come either from Hamburg or by way of Rotterdam.

611. (*Viscount Cranborne.*) Do you know what line they take across Germany ?—They generally come by way of Magdeburg and Emmerich to Rotterdam, and some come by way of Halle.

612. Do they all come from Prussia ?—Yes ; they all come through Prussia ; I believe all of them.

613. (*Mr. Read.*) Can you state how long the cattle would be on their journey from Hungary to London ?—I should think, with stopping on the road, we might say about five or six days.

614. (*Dr. Playfair.*) Not more than that ?—I should think not ; they travel very rapidly now.

615. Have you heard that any of the steppe cattle, since attention has been called to the plague, have arrived with the disease upon them ?—No.

616. (*Chairman.*) During their passage through Prussia, would there be any inspection of the cattle trucks ?—I do not think there would ; on the Polish frontier there would be.

617. Supposing the disease to exist in Hungary, and that the cattle passed through Prussia on their way to a port, would there be any inspection of the trains as they passed the Prussian frontier ?—I think if there was any knowledge of the disease being in those parts, that the Prussian authorities would not allow them to enter at all, because I know they are very strict.

618. (*Dr. Quain.*) Have you formed any opinion as to the way in which the disease has been introduced into this country ?—It is impossible, I think, to say. I should say, myself, that it has come into the country just the same as any other disease ; pleuro-pneumonia, or any other disease.

619. (*Mr. Read.*) Do you believe that it was a spontaneous outburst in England ?—The first that I have seen of it has been amongst dairy cows, and I should not be at all surprised, from the unnatural way in which they have been kept in some of the dairies, that the disease may have originated there, because the way in which some of them have been kept has really been quite unnatural, and the very appearance of some of the animals, when they have been brought to our market, has almost denoted the disease.

620. (*Dr. Playfair.*) Do you mean to say that the dairies in London are badly kept, notwithstanding the inspections which take place ?—Yes ; some of them.

621. (*Mr. Read.*) A cow in an advanced stage of pleuro-pneumonia is a very common thing in the London market, is it not ?—We have seen very little of it this year, or of the foot and mouth disease. We have seen, comparatively, very little of it.

622. (*Chairman.*) Do you import many cattle now from Holland ?—Yes, every week.

623. From what ports do you import them ?—From Rotterdam, and from Harlingen.

624. (*Dr. Playfair.*) It is not an uncommon thing that Hungarian cattle come continually to the

London market ?—It is a difficult thing to say ; but these cattle come every week that we call Hungarian cattle. I allude now to the breed ; but of course we do not know ; we have to do with the dealers only ; and we do not know exactly from what districts they come.

625. (*Mr. Read.*) What colour are the Hungarian cattle ?—They are white.

626. Not black and white ?—No ; they are white cattle, with large horns.

627. (*Viscount Cranborne.*) You have known of no cattle called by the name of steppe cattle in the London market ?—No.

628. Have you never met with such cattle in the course of your business ?—Not at all.

629. (*Mr. Read.*) The steppe cattle have been described as of a mouse colour, with black under their bellies ; do you remember having seen any cattle answering that description ?—No.

630. You saw none of that sort in the cargo which has been spoken of ?—No.

631. Do you know that cattle which have been afflicted with the plague have been bought in the market, and sent off by railway to other districts ?—That I am not prepared to say. I should almost fancy that cows have been bought and sent to other districts. I know that cows are going every week to Leicester, and I should think there had been,—in fact, a man told me that so early as the beginning of June, or the latter end of May, he purchased some cows in the London market, and when he took them home to Leicester he did not know what was the matter with them ; they appeared somewhat to have the symptoms of the disease, which was afterwards discovered, and he had them killed as soon as possible. When they were killed the meat was shown to have inflammation in it, and the bodies were in an inflamed state, so that evidently it must have then been amongst the dairy cows.

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632. (*Chairman.*) What was the date of that occurrence ?—It was early in June, or at the latter end of May ; but I can get the date precisely.

633. (*Dr. Playfair.*) Will you be good enough to get the date and the name of the man ?—Yes ; the name of the man was Mr. John Scott of Leicester. I shall see him next market day, which will be on Thursday.

634. (*Chairman.*) Can you give the names of some gentlemen who are the largest importers of foreign cattle into this country, say of Hungarian cattle ?—Yes, the Berlin salesmen, as a class, export largely into this market, and there are persons in Magdeburg, and also a firm at Cologne.

635. To whom are the cattle consigned in London ?—They are consigned to various salesmen, particularly to Mr. Pool.

636. Where is he to be found ?—In the Metropolitan Market, or No. 17, West Smithfield.

637. He carries on one of the largest businesses in cattle from abroad ?—Yes.

638. It was stated yesterday that some of the cattle were sold at Hull to Mr. Lambert of Manchester. Was that the case ?—No ; the names that were given to me were those of Dickenson and Derby.

639. You gave us just now the name of Mr. Coulson ?—Yes ; they were sold by Mr. Coulson to Dickenson and Derby. Mr. Thomas Coulson is my agent at Hull.

640. (*Mr. Read.*) You stated that cows are sent down to Leicester ; are they sold there for the purpose of slaughtering ?—Yes.

641. (*Dr. Quain.*) To Mr. Scott ?—Yes ; he is in the habit of buying a great many in the London Market.

The witness withdrew.

Adjourned till to-morrow at 12 o'clock.

Wednesday, 11th October 1865.

PRESENT :

Earl Spencer.	Dr. Parkes.
Viscount Cranborne.	Mr. M'Clean.
Mr. Lowe.	Mr. Wormald.
Dr. Lyon Playfair.	Mr. Ceely.
Mr. Read.	Professor Spooner.
Dr. Quain.	

EARL SPENCER IN THE CHAIR.

Mr. Henry Priestman examined.

Mr. H. Priestman.

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642. (*Chairman.*) Have you been employed as an inspector of cattle in the city ?—I have.

643. Will you state by whom you were employed ?—Under the Order in Council of 24th July.

644. You were appointed by the Clerk of the Council ?—Yes.

645. Are you a veterinary surgeon ?—Yes. I am a member of the Veterinary College of London.

646. In what district are you an inspector ?—At the present time I inspect the whole of Islington, Clerkenwell, Holborn, Bloomsbury, St. Giles's, and St. Luke's. I had St. Pancras, but another inspector has been appointed for St. Pancras. And I also had Hornsey and Highgate, but another inspector has been appointed for those places.

647. Have you the sole charge of inspecting these districts ?—Yes, with the exception of inspectors appointed by the parish authorities appointed by the justices.

648. Will you state to the Commission the nature of your duties as inspector ?—As far as practicable to go from shed to shed and inspect the animals ; but the whole of my time is taken up in attending where I get information that the disease really exists. I get information either through the parish inspectors or through the police that cows have been removed from a certain shed, and I apply to the owner of that shed for permission to inspect the cattle, to see whether they are affected or not.

649. Has every parish an inspector under you ?—I am not aware that it has.

650. You have been doing this since when ?—Since the end of July.

651. Can you state the date of your appointment ?—My appointment is dated the 24th of July.

652. Had you any cases brought to your notice previous to the 24th of July ?—Yes, several.

653. Will you state the first cases which were brought under your notice ?—On or about the 27th of June I was in attendance at Mrs. Nichols', "Laycock's Dairy," and I discovered that we had certain animals labouring under disease. At first I was inclined to think that they were very acute cases of pleuro-pneumonia, but upon minute examination I

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was satisfied that it was not so. I had one or two of the animals killed, and made a post-mortem examination of them, and in less than four days we had several which died, I cannot say the number. In three days we had destroyed, I think, about 12 or 14. I examined them all, and I found the post-mortem appearances the same in every instance; of course the post-mortem examination which I made was made in the slaughter-house in the cattle market, or elsewhere; it was only a rough examination which I made. On the 28th of June I was called to a case at Hackney which precisely resembled the cases which I had at Islington. I was with that animal until 12 o'clock on the 28th, and I was in the shed again at 6 the following morning, and I found that the beast was dead. I made an examination of that case, and I found that after death, as I had before found, the post-mortem appearances were precisely the same as in Mrs. Nichols's case. On the 3d of July I had killed, or there had died, I think something like 20 cases, and I had 20 other cases in a quarantine shed on the premises. I applied to Professor Simonds at the college, and stated to him that I had a disease in one or two dairies which I could hardly understand, and in fact that I could not understand it at all, that it was something quite foreign to me. I described to him the symptoms and the post-mortem appearances. On the following morning I took him down the whole of the viscera of the cow which I had killed purposely. I took it as it came from the animal, and he inspected it; he then went with me to the dairy, and there saw 20 cows under treatment, 10 of which I had condemned on the morning prior to leaving as hopeless cases.

654. Were you in the habit of practising in that district before the outbreak?—Yes.

655. Were you constantly visiting many of these cow sheds?—My practice has been principally amongst cows for the last 14 years.

656. Had you visited Mrs. Nichols's shed recently before the outbreak?—Almost daily; the cows were under my control and under my professional care.

657. And do you believe that you saw the first case of this disorder which broke out in that dairy?—I think not, on the 27th of June. I think that one or two cases might have escaped our notice, and have passed as pleuro-pneumonia, the symptoms being so much alike.

658. Were you able to trace at all the origin of the disease?—No; the first observable cases which I took particular notice of were two cows which were bought in the market eight days prior. The 27th was on a Tuesday, and they were bought the Monday week previous.

659. What would that date be?—The 19th; this is Mrs. Nichols's case.

660. What were these cows which Mrs. Nichols purchased on the 19th?—They were two English cows.

661. Where did she buy them?—In the Metropolitan Market.

662. Did you see them when she first purchased them?—I saw them within a day or two; I cannot say whether the next day or the day after, but my attention was generally called to any fresh cows coming in, merely to look at them, and give a casual opinion of what I thought they were worth, and so on.

663. Were these cows in a healthy state when you first saw them?—They were apparently.

664. Where did these cows come from?—They were bought of Mr. John Lowe, but he had purchased them in the country; in what part I cannot tell you.

665. Who is Mr. John Lowe?—He is a cattle salesman living at Tottenham.

666. You have not endeavoured to trace them up any further than to the possession of Mr. John Lowe?—I have not; but I believe that they have been traced. I left that to Professor Simonds. He said that he would make that inquiry.

667. Will you state what you know of the possession of these cows; do you know from whom Mr. John Lowe got them?—I do not.

668. Did you hear at all from what part of the country they came?—No, I cannot say that I did.

669. You were not able to trace them up to contact with any animals which were diseased?—I did not make that inquiry about them, or I daresay that I could have found out. I could even now find what part of the country they came from, where they were purchased, and of whom.

670. Do you know from what district Mr. Lowe generally procured his stock?—From Leighton Buzzard, I know.

671. What did Mrs. Nichols do when she found that the outbreak was in her dairy?—I imagined at first that the animals were poisoned in some way. I inquired about the grass. I found that the grass had been fed off for the last seven or eight years, and had never been manured, with the exception of the manure from the cattle, and that it had been fed off by foreign beasts. I examined it and found that it consisted of clover, and what I considered good keep for them. It was cut and brought to the premises from the field. They were feeding when the disease first broke out twice daily upon this grass. I ordered it to be discontinued, and it was discontinued, and I thought that for a day or two we had fewer cases, and that we were going on better, and I felt rather inclined to think that it must have been from the grass, but after the lapse of two or three days it appeared to break out with increased virulence.

672. Are these cows kept on the borders of London, or are they in town?—They are in Islington. It is about two miles from the city of London.

673. Were the sheds where these cows were kept in proper order?—The shed was in very fine order; it was very lofty, and one shed would hold from 80 to 90 cows. The first animals attacked were outside, in open sheds, not in the large shed. They were covered to the beasts, but open behind them.

674. Besides the farm has not Mrs. Nichols some lairs?—The lairs adjoin the dairy where the cows were kept.

675. Were there many cattle housed there previously to the outbreak in the dairy?—A great number.

676. Had you observed any diseased animals among them?—I had not. I examined them for weeks after the outbreak almost daily. I walked through the lairs to see whether I could find anything similar to what we had in the shed.

677. (*Viscount Cranborne.*) What are your powers with respect to the slaughter of animals; may you order any animal which you think diseased to be slaughtered wherever you find it?—We may order it to be slaughtered if we are satisfied that it is diseased.

678. Whether you find it upon private property or in the market?—Of course upon private property. I have no control over the market.

679. In any place, no matter where, so long as you think an animal to be diseased, you may order it to be slaughtered?—Yes; I have the Consolidated Order in Council which I act upon.

680. Do you carry on a constant inspection, not only of the market but also of all private sheds within your district?—As well as I can.

681. How often does your time enable you to go to each shed, I mean a shed of which you have no particular knowledge that it is infected? Do you not go to sheds unless you know that they are infected?—Not to very many.

682. Then how do you find out when a shed is infected?—I get the information either through an inspector or through the police, or from what I glean in going to other places.

683. Do the police or the inspectors go into the sheds?—They do not.

684. Then how do the police get any knowledge

of the infection?—The police see cows taken away from a shed; latterly they have given me information.

685. Have the police done that of their own accord or under any order from head-quarters?—I am not aware.

686. Do the police make it a part of their duty to watch property to see whether cows are taken away?—They have not done so.

687. Should you say that there was a sufficient force of inspectors to be able to keep a constant supervision over all sheds, infected as well as uninfected?—No, not by a great many.

688. How much larger should you think that the force ought to be before any such supervision could be carried out, a supervision sufficient to detect infected cattle by actual inspection?—It would require one inspector to every parish.

689. How many parishes now go to an inspector?—I have six or seven, some inspectors have but one, there is one appointed for St. Pancras. I had St. Pancras with my others.

690. Have you any idea how many head of cattle are under your own care?—There are now very few, more than four-fifths have been destroyed, or have died.

691. Before the pest commenced how many do you think you had?—I can form no idea.

692. Not even an approximate idea?—No.

693. Do you know how many cattle owners you had under your jurisdiction?—No.

694. Had you any systematic and regular circuit, any order in which you visited the sheds; or did you only do so wherever you might accidentally hear of infection?—That is all.

695. So that you depended entirely upon information thus accidentally gained, either casually or from the police?—Yes; I was obliged to do so.

696. Your leisure was not sufficient to enable you to do more?—It was not. I could not possibly do it. I have employed my assistant to go round and get what information he could. He has visited from shed to shed, but the owners were rather lax in giving him information; many of the people would do so because I was well known to the cowkeepers as attending a large quantity of their stock.

697. You found that the cowkeepers were generally not anxious to inform you whether there was disease or not?—They would not until they had got rid of the principal part of their stock, and then they would give us the information freely.

698. How many cattle have you ordered to be killed since the first outbreak of the pest?—I cannot tell you the exact number; I have an account of them.

699. Will you send it in to the Commissioners?—Yes; I have had diseased cows killed or have allowed them to die. Sometimes, when the owners have disputed whether the animals were actually suffering from the disease or not, I have allowed them to keep them until they have died.

700. I wish to know how many you caused to be killed; you never have any killed but those which are diseased, do you?—No, except that I give an order for those to be slaughtered which do not show signs of the disease, if the owners think proper for them to be slaughtered.

701. Is the slaughter done at the public expense?—It is done at the man's own expense; he is not compelled to slaughter the animal. For instance, I had a case this morning of the disease, where a man has the disease among his stock at Finchley, and he has a good cow at home, at Holloway, at his shed. He came to me saying that he wanted to sell the cow, that a butcher wanted to buy her. I saw her; she showing no signs of the disease, I gave my certificate to the butcher to take her away and slaughter her; and he signed my certificate as having received her.

702. What advantage is that to the man?—She shows no sign of the disease although his stock are affected; it is to enable him to sell the animal.

703. Have you any proof that the cow is killed beyond the assurance of the owner that it is not sent away into a grazing district?—I have the receipt of the man; it is on the order.

704. Is that the owner or the butcher?—The butcher.

705. Then the butcher is paid for what he does by the man whom you forced to kill his cow?—I do not force him at all; it is the concern of the man; he wishes to make money of this cow before the disease affects her.

706. I am speaking also of the diseased cows; at whose expense are they slaughtered?—At the owner's expense.

707. Suppose that the owner does not kill them?—Then they die.

708. You cannot force the owner to kill them?—You can compel him to kill them, and he ought to bury them; but in London we cannot make the owners bury them, there is no room to bury them.

709. (*Dr. Playfair.*) You can compel them to kill the diseased cows?—Yes.

710. (*Viscount Cranborne.*) What would happen to a man if he did not kill his diseased cows?—I should prosecute him.

711. Have you ever prosecuted a man?—No, not at all.

712. Do you know what penalty he would be liable to?—A penalty not exceeding 20*l.*

713. How long have you been appointed?—Since the 24th of July.

714. Were you a veterinary surgeon previously to that?—Yes.

715. Is that the case with all the inspectors in the district?—I am not satisfied of that fact.

716. Have all the inspectors in your district equal power with yourself to order diseased animals to be killed?—I believe that they have.

717. Has your assistant that power?—No.

718. Were any testimonials required of you before your appointment?—No.

719. Were you required to show any degree or diploma?—No.

720. (*Dr. Parkes.*) You saw the first case on the 27th of June?—Yes.

721. The animal was then ill, and you recognized a serious disease?—Yes.

722. At what date do you suppose that that disease would have commenced in that animal?—Most likely the day before.

723. You are not certain?—I am not certain. We were in so much confusion then that particulars were not taken as they would have been. We had 40 animals all ill with a fresh disease, and there was confusion in every way and shape at that dairy at that time.

724. I think that you have stated in answer to the chairman that there may have been some previous cases?—There may have been.

725. Is it possible to learn whether or not there were any previous cases before the 27th of June?—It is impossible.

726. Is there nobody at all to whom we could apply for information?—Nobody.

727. What makes you think that there were previous cases, or might have been?—I think that there might have been, from reference to my book, and I also find that we had cases which were sent away as cases of pleuro-pneumonia, and I think that I might not have gone so minutely into the matter, and might have passed them over as cases of pleuro-pneumonia a day or two before the 27th of June.

728. In the same dairy?—Yes.

729. Not in any other dairy?—No; I do not know of any other dairy.

730. Are you quite certain that the first two cases which you saw at Mrs. Nichols's were bought on the 19th in the market?—It was so described to me.

731. Do you happen to know whether they were in the same part of the market as that at which the first case at Hackney was bought?—They were

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bought precisely on the same day as the Hackney cases.

732. And in the same part of the market?—Yes, because all English cows are sold in one part of the market; there is a part apportioned purposely for the sale of English cows.

733. I think you said that Mrs. Nichols's cows had been grazed on grass which had received the manure from foreign cattle?—It had been grazed by foreign cattle for the last seven or eight years, I believe.

734. Do you believe that it had been so grazed by foreign cattle immediately before this disease broke out?—I believe it had.

735. You do not know what foreign cattle?—No.

736. You are not aware whether any of the Revel cattle had been fed there?—No; I believe that it would be a mixture, but I had nothing to do with that as my duty was merely with the shed cows.

737. (*Mr. Read.*) If they were fed upon this cut clover, of course the clover must have been some weeks in growing since the cattle were depastured upon it?—It had been shut up but a month at most.

738. You have said that Mrs. Nichols's cows first suffered from the plague; is Mrs. Nichols's dairy the same as "Laycock's Dairy?"—Yes.

739. Is there a better built or better ventilated or managed dairy in the metropolis than Mrs. Nichols's dairy?—I think not; I always considered it one of the best sheds which I have gone into.

740. You have spoken of diseased stock, by that you mean simply those diseased with the plague?—Yes.

741. What has been your usual custom as regards pleuro-pneumonia; if you found a cow which was good beef did you attempt to doctor her?—Never; I sent her away.

742. You think that you might have mistaken an early case of the plague for pleuro-pneumonia, and have adopted the same course?—I feel satisfied that I might.

743. These were two fresh cows; is it your opinion that these cows contracted the disease in the market, or that it arose spontaneously in that dairy?—That I cannot say.

744. You have not formed an opinion upon that point?—I have not.

745. (*Mr. Ceely.*) Have you made many inspections of dead animals?—Yes.

746. Is there much uniformity in the appearances? Yes. I have not made so many inspections of dead animals lately, having been otherwise engaged, but at first I did so, and there was a general uniformity.

747. In the fourth stomach?—Yes, in the fourth stomach, and all through the mucous membrane; the first stomach was invariably full.

748. Was the vagina invariably affected?—Yes.

749. You found that in all the cases which you saw, from first to last?—Yes.

750. Differing in degree, I suppose, but not in essence?—Differing in degree, according to the length of time and suffering. Some of the animals were killed immediately that they showed the slightest symptoms.

751. Are Mrs. Nichols's lairs still used?—Yes.

752. Are there any diseased animals in those lairs?—I have not heard of any.

753. (*Dr. Playfair.*) Are they at some distance?—They are all attached; there is a wall between in parts, and there are gates between others. You can walk from one end to the other all over the premises, the lairs and the dairy premises as well.

754. (*Mr. Ceely.*) Is the disease still progressing in your district?—We get fresh cases, but not so many or so frequent because there is such a decrease of stock.

755. Do you think that there is as much mortality as there was in reference to the number of cases?—Yes very nearly.

756. You do not think that the disease is milder? It lasts longer, but the result has been as bad.

757. Have you seen many animals recover?—Yes, a good many.

758. Has there been any ultimate death after apparent convalescence from the disease?—I had one case which was affected with plague which recovered, and then went off in three weeks afterwards of pleuro-pneumonia. It was an animal which had suffered from the foot and mouth disease previously to the plague.

759. In animals in which there has been no complication of pleuro-pneumonia have you ever seen a prolonged existence of the disease?—Yes.

760. Where an animal recovers of this specific disease do you think that it is a very useful animal?—In the majority of instances it is; in many cases where the animals have recovered they have been reported to me as cases improved in their milk, and as having given more milk than they did prior to being attacked.

761. Have you formed any conception at present as to the probable duration of the contagious properties in a convalescent animal, presuming them to be contagious. When an animal has recovered from the disease, how long do you suppose that it would be safe before you can mix it with others unaffected?—We have not tried that.

762. (*Mr. Wormald.*) How long has Mrs. Nichols's dairy existed?—A great number of years; I remember it myself over 20 years.

763. I recollect it over 50 years, and the owner of it, I think, was an old man; it belonged to Laycock?—Flight had it.

764. Laycock had it before Flight, had he not?—I do not recollect that.

765. It has existed over 50 years to my certain knowledge. Do you believe that when cattle have been kept in one situation for a great length of time they will be more prone to take disease than if they were in places which had not been used for such purposes?—Yes, I think they are.

766. Have these cows any opportunity of licking themselves when once they are tied up?—Yes.

767. Are they let loose?—No, not as a rule, but they have room to lick themselves, they can lick themselves if they are tied up.

768. What is the length of the band or machinery?—It is a chain which goes round the neck and works in a swivel, so that they can turn themselves both ways. They have room to turn themselves right and left; they are invariably tied in pairs.

769. If a cow is tied up by the neck I do not see how it can very conveniently lick its rump?—They do it.

770. Are these cows ever washed?—No, but they are curricombed and brushed.

771. They are kept very clean?—They are kept very clean there as a rule.

772. But they never have any moisture put upon them?—Not upon their bodies.

773. Do you think that it is a needful thing that cows should have some moisture applied to their skins?—I think that it would be a good plan.

774. If we observe nature we see that a cow devotes a great deal of time to her toilet?—Yes, she does.

775. She bathes frequently?—If there is water in the field, or near it, she will go into the water when the flies are troublesome, and so on.

776. And she throws water over herself with her tail and legs?—Yes.

777. These cows have no such opportunity?—They have no such opportunity whatever.

778. Have you ever seen one attacked a second time with this disease?—No.

779. (*Professor Spooner.*) You say that in the early outbreak of the plague you think you might have mistaken several cases for those of pleuro-pneumonia?—I say one or two. I have not several booked as

having been sent away, but one or two cases I might have mistaken for pleuro-pneumonia.

780. Do you consider from your subsequent observation of this disease that you are now quite confident in its early stages to detect the one disease from the other?—Quite.

781. Will you explain to the Commission one or two leading symptoms which will enable you to come to that conclusion?—The leading symptoms would be the injection of the congenitiva, and also of the vulva. There is also loss of appetite and of milk.

782. But that you find in pleuro-pneumonia?—Yes, but not so sudden a loss. You do not get so large a decrease of milk in pleuro-pneumonia as you do in this disease.

783. You say that the leading symptoms of distinction between this disease and pleuro-pneumonia in its early stage are the injected state of the vulva and the congenitival membrane of the eye?—Yes.

784. Are those the main points upon which you rest your judgment?—There is auscultation.

785. So that in fact you are now satisfied that you can distinguish between the one disease and the other?—I feel satisfied that I can.

786. In the early stage?—In the early stage.

787. Do you frequently find a complication, that is to say, that the same animal is suffering from both diseases?—I often do. I have found many cases of that sort.

788. Do you mean to say that a cow is suffering from pleuro-pneumonia in an acute form, and that while so suffering she may also be attacked with the plague?—Yes.

789. Or do you mean to say that a cow may have recovered from pleuro-pneumonia, leaving a solidified portion of the lung, and is suffering from this disease?—It may be either way. The lung may be affected by pleuro-pneumonia as well as by the plague.

790. Do you not view them both as special diseases?—Yes.

791. Do you think that it is likely that those two special diseases will exist in an acute form in the same animal at the same time?—I have every reason to believe that they have done so in one or two cases which I have seen.

792. Are you of opinion that there is any connexion whatever between this disease and what is called the foot and mouth disease?—I have known them to exist together since this outbreak in the same animal, that is to say, the foot and mouth disease and the plague.

793. In that case has the plague usually preceded the foot and mouth disease, or vice versâ?—Vice versâ in one case which I particularly remember, one animal belonging to Mrs. Nichols—it was in a field at Hornsey—the foot and mouth disease existed first.

794. Do you not know that in some cases after recovery from the acute symptoms of pleuro-pneumonia cows are subject to rheumatic attacks of their joints and muscles?—I have seen it more particularly after the foot and mouth disease.

795. Have you found in your experience that the plague is more prevalent in those dairies which have been in a neglected state and badly ventilated, or have you found it equally in those which are well conducted as in those which are the reverse?—I have found it more in well-ventilated places up to the present time.

796. And what you would deem to be well-conducted establishments?—Yes; I have found more cases in well-conducted and well-ventilated sheds than in ill-ventilated and ill-conducted ones.

797. Do you mean that in well-conducted establishments, to which you refer, there are a greater number of cows contained?—There would be a greater number in one place.

798. Has not your attention recently been called to an establishment in St. Giles's?—It has.

799. In what state did you find it?—That is a very lofty and well-ventilated shed which is surrounded with buildings; there is a large skylight; it would hold something like 40 cows, and I believe it to be the first case in St. Giles's. I have not been able to detect anything previous to it?

800. You have told the Commission that you consider that many of the cases occurring now are much longer in their progress than they were formerly, although fatal ultimately?—Yes.

801. The mortality you think is no greater now than it was in the first instance?—I think that the mortality is not so great.

802. Have you any opinion to offer why such a change should have shown itself?—I think that the change in the weather has had a beneficial effect.

803. Do you consider this an imported disease, or that it has been generated in this country?—My opinion has always been that it has been generated in this country, that has been my opinion from the experience which I have had respecting it.

804. You have said that several cows have recovered?—Several have recovered.

805. Have you had any opportunity of watching those animals for a period subsequently to their recovery?—Not minutely.

806. Can you state as to the quantity of milk which they may have given, or how long they may have been in a convalescent state?—They would lose their milk for days, or they would give a very small quantity, just half a pint, which they would give out on to the ground.

807. You have said that cows which you have known to recover have subsequently turned out very useful animals?—Very useful animals; I have several such cases.

808. You mean for milking purposes?—Yes.

809. (*Dr. Playfair.*) You have said that you are satisfied that there may have been two or three other cases in the dairy to which you have referred a day or two before the 27th of June?—Yes.

810. And that you sent them away from the place?—Yes.

811. Have you any reason to suppose that those animals may have been bought in the Metropolitan Market at any time since the 1st of June?—I have not.

812. They were part of Mrs. Nichols' old stock, they were not purchased since the 1st of June?—Just so.

813. Does that influence your mind in supposing that two cows from the Metropolitan Market which were bought on the 19th of June had introduced the plague. If these animals were there before the cows which were bought upon the 19th of June, do you consider that the old animals would have shown the symptoms earlier than those which you suppose brought the plague from the Metropolitan Market?—No; I should have thought that the animals which came from the Metropolitan Market would show symptoms of the disease first. The new animals were tied up away from the shed, and separately; it was always the rule to place the new animals away for a week or 10 days. That was my wish, for fear of the foot and mouth disease.

814. But you say that you think that the disease first broke out in old stock, and not in new stock?—Yes, if my opinion is correct as regards one or two animals being sent away previously to the 27th of June, but that is merely an opinion.

815. (*Mr. Lowe.*) You say that the cows cannot be buried in London. What then is done with them?—They are sent to the knackers.

816. The diseased cows?—Yes.

817. Do you consider that a probable means of disseminating the disease?—I am not able to satisfy myself what becomes of them after they go to the knackers, although, as cases arise, they put lime and so on upon the carcases.

818. Do you consider this disease contagious?—Very.

819. Do you think that the system under which you are acting as an inspector is an efficient one?—No.

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820. In what respects is it inefficient?—That there are not sufficient inspectors.

821. Do you think your powers sufficient?—Yes, I think that the powers are sufficient.

822. Have you any suggestion to make as to any increase of power?—None whatever. I think that we have quite powers enough.

823. Is it not the case that the disease has very much spread from the Cattle Market?—Undoubtedly.

824. Have you any power to prevent beasts being taken from the Cattle Market all over the country?—They have inspectors of their own in the market. I have seized animals in the market slaughter-house, and handed them over to their inspector in the morning.

825. So long as animals can be sent from the market all over the country, do you consider it possible to put an end to the disease?—No. I think that they ought to be stopped from going from the market into the country.

826. (*Mr. Read.*) I asked you where you thought that the disease was generated, you say that you think that it is of spontaneous origin, may I again ask you where you think that it originated?—In London.

827. Where in London? Do you think that it was in the Metropolitan Market or in the dairy that the two cows which you have spoken of contracted the disease?—Most likely in the market.

828. (*Chairman.*) Did Mrs. Nichols send any of her cows into the market after you first discovered this disease?—Yes, a great many; she sent a great many into the market alive, in fact the first Monday there were between 200 and 300 cows diseased in the market that I saw. I was with Professor Simonds and spoke to him about it. The first Monday after the discovery at Mrs. Nichols' would be on the 10th of July, after I had reported.

829. They came from various dairies?—From various dairies.

The witness withdrew.

S. Gibbins, Esq.

SAMUEL GIBBINS, Esq., examined.*

830. (*Chairman.*) Will you state to the Commission your position?—I am the chairman of the Markets Committee, who have the control and management of the Metropolitan Cattle Market of the Corporation of the City of London. I hold the position of chairman from having been many years connected with the City, and being a member of the Common Council. I am a member of an old firm of merchants in the City of London, by trade, and have nothing whatever to do with cattle; but as chairman of the Markets Committee I of course have had experience with them from the time that I have been associated with the Corporation.

831. You are appointed by the Council of the City of London?—Yes, by the Common Council of the City; one of the gentlemen who are on the committee is selected as the chairman for the time being.

832. What is the committee over which you preside?—The committee have charge of the whole of the markets of London, whether the Metropolitan Cattle Market at Islington, or Billingsgate Market, or Leadenhall, or Newgate.

833. In fact all the markets?—All the markets of the Corporation of London. As respects the Metropolitan Cattle Market, we are governed by an Act of Parliament, which has been occasionally altered from time to time, but which gives absolute power over the cattle in the market, and jurisdiction in every respect over it. The market itself was built by the Corporation at an expense of something like 400,000*l.* It was formerly in Smithfield, and was removed from thence to where it is now.

834. Will you state how the committee is elected?—It is elected from the Corporation in the same manner, I apprehend, as some of the committees of the House of Commons are elected. At the commencement of the year one member is taken from each ward. The city of London is divided into 26 wards, and one member out of each ward is selected and put upon the committee.

835. Your jurisdiction extends over all the markets?—Yes.

836. Will you state what the cattle markets are over which you have jurisdiction?—The Metropolitan Cattle Market at Islington is the only cattle market; there are also Billingsgate Market for fish, Newgate Market for dead meat, and Leadenhall Market for meat and poultry.

837. Is there any market besides the Islington market where live beasts are sold?—Not in the metropolis.

838. Are your ordinary powers very extensive over the stock which come to your market?—Very extensive; we have absolute control over beasts which come into the market, as far as they are in the market. Our control of course goes to providing proper stalls, proper places for sale, and proper arrangements, so that the business shall be conducted at a certain time and disposed of in a certain way.

839. Have you the control of the sanitary conditions of the cattle which come to the market?—Entirely so.

840. What are your powers with regard to that matter?—They are absolute. We have the command and the complete supervision of the market in every respect, both as to the supply of water, and the supply of the means to clean the market. There are lairs where hay and water are supplied; but their use is optional.

841. Have you ordinarily inspection over the cattle?—Yes, we have an inspector specially appointed by the Corporation who is responsible to the committee, and he has power to appoint and has appointed four others under him, to help him in his work. On ordinary occasions one inspector is responsible, whose duty it is to inspect the cattle, but he always has assistants, if necessary, whether veterinary surgeons or otherwise, as he may think proper.

842. Does he report to you in the case of sick cattle coming from the market?—It is his duty to report it every market day, Mondays and Thursdays.

843. What power on ordinary occasions have you of disposing of any sick animals?—If an animal is there sick and diseased, we have the power to order it to be slaughtered; and if in a bad state, chloride of lime, creosote, or other means are applied, and then the body is sent to the knackers to be destroyed.

844. Are you speaking now of before the Rinderpest broke out?—Yes, of the ordinary powers. Ordinarily speaking, if a cow or sheep be found fit for food the beast is given up to the owner; if not fit for food the animal is slaughtered, and the skin given to the owner in the ordinary way; but since this disease has appeared we have destroyed it entirely.

845. Will you state to the Commission any facts which have come within your knowledge with regard to the outbreak of the cattle plague in the Metropolitan Market?—The facts have been so numerous in the last six weeks, that I am afraid they would take a very much longer time than you would like to give to them.

846. When did the outbreak of the disease first come to your notice?—The first that I heard of it was the 26th of July; it was the last meeting held in July.

847. You did not hear of the Cattle Plague before the end of July?—No. The committee ordered that

* *See* Appendix A., Returns furnished by Mr. Gibbins.

the inspector should use every possible means to ascertain where those diseased animals came from, that he should take care that the market was properly and thoroughly disinfected, and that all the hydrants should be put into proper repair, so that the whole market should be flooded every market day. It was quite the end of July before the attention of the committee was drawn to the subject from any report the committee received from the inspector there.

848. Did you increase the number of your inspectors?—Immediately; we immediately ordered an inspector to be placed at each gate, independently of the inspector who was responsible to the committee. We had an inspector at each gate to look at every animal which came in, and to report.

849. Do you consider that these measures have been efficient?—Yes; for on Monday week's market, out of 6,550 beasts, 35,650 sheep, 454 calves, and 310 pigs, only one beast was found in a diseased state and ordered to be slaughtered; whereas, in the beginning of August, on one or two occasions, there were scores sent out of the market in consequence of having symptoms of the Cattle Plague. On one day it was stated that there were nearly 200 there.

850. When was that?—At the beginning of August, when our attention was first drawn to the matter. On one day it was a question whether nearly 200 should be destroyed or not.

851. What happened with these 200 animals?—A great number of them were destroyed under the first Order in Council, and as to the others it was doubtful what should be done with them. There was a drove of some 120 to 150 animals. Our inspector was alarmed at the magnitude of them; and as they only showed the first symptoms of the disease, and were fit for human food, he thought that it was too great a matter for him to order them to be destroyed, and they were allowed to leave the market.

852. Since then have there not been other cases or a similar kind?—Not of that magnitude. We have had other cases since then; but I myself consulted with Professor Simonds on the subject, and we thought it best strictly to adhere to the Order in Council, and that when any more animals came in that state they should be destroyed, and some hundreds have been destroyed since, but at no one market were there as many as on that day.

853. Do you not believe that a good many animals which have been in the market since July have taken the disease to the country where they have gone?—I have no doubt of it. I have no doubt that innocently the Metropolitan Market has been the means of distributing the disease all over England.

854. How do you account for that?—On the first outbreak of the disease in London the cowkeepers were frightened. They found one cow after another dying, and understanding that the cows in the early stage were fit for food, and knowing that if they remained on the premises they would all die, or fearing so, they hurried them off to the market as fast as possible. It was not then sufficiently known to be detected, and they went from thence to other sheds and other places. I have not the slightest doubt in my own mind that that was the fact, and as soon as I was acquainted with it I took the opportunity of waiting upon Sir George Grey, and pointed out to him that we had no power to stop the beasts coming into the market; because up to that time, it being a public market, however diseased a beast might be, we could not stop it, either by the Act of Parliament, or by the Order in Council. Subsequently the Privy Council passed an Order in Council giving power to inspectors to inspect sheds, and to prevent animals coming from diseased sheds to the market, or to any other market.

855. Your inspectors were not able to detect the disease in the early stages of the outbreak. Animals with the disease in the early stages came into the market?—They were not able to detect it in the month of July. I think that now they are pretty well informed upon the subject, and that when they see a cow they know whether she is diseased or not.

856. What has been the effect of the suggestion which you made to Sir George Grey, which I believe has been carried out?—Referring to that Order in Council, directions were given that the name of the owner of beasts coming to the market should be taken down, the number of cows, and where they came from. We had other means of ascertaining where the disease was raging, and in whatever shed it was raging those cows were not permitted to come into the market. By strictly adhering to these orders we have been able to stop diseased cows from coming into the market, and have, I think, cleared the market of a great deal of its former mischief.

857. What measures do you now consider of importance?—A difficulty has arisen in consequence of the last Consolidated Order. It is stated in the 18th clause of the Order in Council of the 22d of September, that during the continuance of the Cattle Plague no animal shall be brought or sent to the Metropolitan Cattle Market, or any other market, except for the purpose of being slaughtered. Then it goes on to state, "and every such animal *as soon* "*as sold* shall be marked for slaughter in the manner "in which cattle are ordinarily marked for slaughter "in the Metropolitan Cattle Market." About 40,000 or 50,000 head of cattle, including sheep, are ordinarily sent to the market, and it was difficult to tell when the time of selling commenced and when it closed; the whole of the cattle and sheep were to be sold and cleared away by two or three o'clock in the afternoon, and we found a difficulty in ascertaining when they were sold. We could not mark them before they were sold, but as soon as they were sold we were to mark them, and we found a difficulty in that respect; a salesman the first time refused to have his cows marked for slaughter, saying, "They are not "sold, and I defy you to mark them." We waited upon Mr. Helps and had some conversation on the subject. We felt the difficulty because we could not tell when the animals were sold, and that we could not mark them unless they were sold. I suggested certain alterations, feeling there were great difficulties in that respect. One thing was that it was undesirable to alter the Order in Council which had been so carefully drawn up, and it was suggested that probably some means might be found of carrying out the Order in Council without altering it. Upon reflection orders were given to the principal clerk in the market to go round at a certain time in the day and ascertain from every salesman whether his beasts were sold or not, and as soon as they were sold they were marked. The principal salesmen co-operated with me and with the Government to have this carried out. Directions were given to him to take down the names of those who refused to have their cattle marked, and the number of cattle, so that, if necessary, a report might be sent to the Government; and it had a marked effect. When they found their names taken down, and that they were likely to run counter to the Order in Council, and to be brought before the Government, they began to give their names, and consented that the tails of the animals might be cut; and last Monday, I believe, very few left the market which were not so marked.

858. What proof have you that the animals which were sold were sold for the purposes of slaughter only?—There is a well-known custom in the market that when cows or beasts are marked for slaughter in the usual way they cannot be bought for any other purpose; no one would buy them for stock; it is well known now that the moment the tail is marked the beast must be slaughtered within a day or two.

859. With regard to those animals which are not sold, what happens to them?—They are taken into the lairs, with the consent of the owners. Since this Order appeared (with the consent of the owners), on Monday week, out of 6,550 beasts, 1,115 were turned into the lairs at the close of the market, 492 left

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the market, the owners refusing to mark them. Last Monday we had a very much better state of things.

860. What do you suppose became of the 492 animals which left the market without being marked?—150 were sent down to Plymouth to one of the Government contractors there, 94 were sent to Aldershot, and others in the same manner. It seems that those who contract to supply the dockyards with food have as a rule to submit the beasts for inspection before they are killed, and afterwards when the beasts have been slaughtered. These men, I presume, fancied that by the animals being marked in the tail for slaughter it would be known that they came from the Islington Cattle Market, and that it would prejudice them in the eyes of the inspectors at the dockyards. I told the inspector that the Orders must be obeyed, or that their names must be sent to the Government. Since then many have consented to have the animals' tails cut.

861. Has the working of this Order in Council been as beneficial as was expected?—Very much more beneficial than I thought a fortnight ago. I think that it is one of the best means which has been adopted to prevent the spreading of the disease; because now when it is known that animals are to be slaughtered that come into the market, or soon after it, few beasts come except for that purpose.

862. Has it diminished the number of cattle sent to the market?—No; the cattle lately have been very much increased. Formerly about one fourth part of the beasts which came to the market were foreign, and three fourths were English; but now, taking last Monday week as an instance, there were 6,550 beasts in the market, out of which there was the amazing number of 4,140 foreign; there are nearly two thirds foreign now instead of three fourths English.

863. Has it diminished the number of English cattle in the market?—Very much indeed. For the year 1862 I have the following particulars: I have separate returns for each week, but this is an aggregate return for the year. Out of 300,000 beasts which came through the Cattle Market, 50,000 only were foreign, and 250,000 were English. In 1863, out of 310,000 in round numbers, the foreign had risen to 80,000, and the English had decreased to 230,000. In 1864, out of 339,000, the foreign had increased to 119,000, and the English had decreased to 220,000. This year it will be still more startling. I am inclined to think the number of foreign beasts will reach something like 200,000, and that about two thirds of the whole amount of the year will be foreign cattle. In the last few weeks the foreign cattle have been very numerous.

864. Have you any means of comparing the number of English cattle sent to market before the last Order in Council, and since?—Yes, I have a return every week.

865. What has been the effect?—If it had not been for foreign beasts we should have had no means of supplying the London market with meat; but these foreign cattle have not come over in the fat state that our own cattle used to do from the North of England; but why meat is so dear I cannot make out.

866. Were the cattle dealers abroad who sent these cattle aware of this Order in Council?—No, not until last week. I have been in communication with several of them; and they are now acquainted with it, but they were not at that time.

867. Do you believe that it will have any effect in stopping the number of foreign cattle coming to the market?—I think not. My opinion is that our healthiest meat now comes from abroad. I have myself a very strong feeling upon the subject; and have heard that the Government contractors who go to the market, and who select cattle for the dockyards, mostly select the foreign meat as being the more healthy, and better for the service. The Jews as a body, who are very particular in their eating, as a rule take foreign cattle in preference to English.

868. From what part of the continent do these cattle generally come?—We get a great many from Germany, Austria, Hungary, Poland, and a great many from France. Some of our best beasts come from Spain and Portugal; in fact they come from all over the continent. Preparations are being made in Norway and Sweden to send over very large quantities.

869. Do they generally come to market in a healthy condition?—They come much more healthy than some of our English beasts do; the great outcry about the passage does not generally apply; there is no doubt that in some instances they have been very badly and cruelly treated, but those are exceptions to the general rule.

870. Is there a good system of inspection of these cattle when they leave foreign ports?—I am told that they are very rigid in their inspection on the continent; and I take it that the Government inspectors in England are very particular, certainly since the disease has become known.

871. The Custom House officers have been so?—I think so. I believe that they have been very successfully so. I know that the beasts which have come up to the market have been so singularly healthy that it is very rarely indeed that we have had occasion to seize or condemn a foreign beast. The greatest bulk of those which have been condemned have been cows, especially cows in the early stage of the disease, and latterly there have been some beasts also, but most of them have been English beasts.

872. What opinion have you formed as to the contagious or not contagious character of this disease?—I believe that it is a very contagious disease; when once a horned animal has been affected by it, and gets along with others, I have no doubt that it is very contagious.

873. Have you formed any opinion as to the origin of the disease?—Yes; my opinion is very strongly that it originated in our own London cow sheds, particularly the cow sheds connected with the metropolis of London.

874. Will you state generally your reasons for that opinion?—As respects the cargo from Revel it is well understood here I suppose how that cargo came. All I know of it is that about 170 beasts of that cargo landed at Hull, came to the London market, and were sold there on the 1st June in a healthy condition. Out of the 170 some went to Gosport; they passed our market; they were inspected at Gosport and found right; they were afterwards inspected when killed, and passed as food, and I believe were placed away as food. The others went, some towards the West of England and some elsewhere, but we have never heard a single syllable about them whether they were diseased or not; none of those cattle were stopped or found diseased anywhere. But something like a fortnight or more after those beasts were in the lairs of the railway company near the Cattle Market some cows manifested signs of the disease; many scores of cattle had been in the lairs between the time of the Russian beasts being there and the time of these cows being affected with the disease.

875. You say a fortnight after these animals were in these lairs. They were sold on the 1st of June, were they not?—I have not the details with me. I can supply the dates. At about the same time cattle were found diseased, and people were losing their cattle in every part of London. In Peckham Rye, Lower Norwood, and Islington, especially at Islington, in the western districts, and in the eastern districts, every morning came a report that so-and-so had lost his cattle, and so-and-so had lost his cattle. All this took place so simultaneously that I cannot at all understand how the disease can have been spread over the dairies, supposing that this cargo had brought the disease. About that time the letters which I had from every cowkeeper in different places were quite distressing. They stated that the disease was breaking out, and that some had lost

28 animals out of 30, and that some had lost three or four out of eight or ten, and in one case a poor fellow lost 100 out of 107, and so on. We thought that it could not have been brought from abroad, but that it originated from the state in which cows were confined and were existing in our London dairies; and when I tell you that in some of the London dairies cows were found which had never been out of the shed for two and three years, having been chained up to the mangers until the time when they came out, you will be able to judge for yourselves. In one shed in Warwick Lane, Newgate Street, there were 28 cows, and at one time when I was speaking on the subject I stated that at that time no disease had been found in any of the sheds in the city proper. I think that we have 29 sheds in the city of London. But the next morning a report came that in this very shed the disease had broken out, and since then the whole of the animals had been killed. I am very strongly of opinion that it will be most desirable for the health of the cattle, and for the question generally, that no cowsheds should be allowed in London at all. The herding together of large quantities of cattle in London and in the immediate neighbourhood is very injurious, both to the question of milk and to the health of the cows, and I think also to the parties themselves; and many of our larger dairy-keepers, I am told, have made arrangements to have their dairies further from London.

876. (*Mr. Lowe.*) You say that one beast in the market was ill on Monday?—On Monday the report was, one beast and one sheep.

877. What was the beast ill of?—Of this disease.

878. The Rinderpest?—Of what is supposed to be the Rinderpest.

879. This contagious disorder?—Yes.

880. You say that you prevent the beasts coming from the sheds; how do you prevent them?—We did not prevent them, but the Order in Council did. The suggestion of the Markets Committee was promulgated, and a penalty is now attached to those who are sending them from the sheds.

881. Do you think that that works?—I think that it has worked to a great extent.

882. Have you a perfect system of inspection so as to visit every shed?—We have no power of going beyond our own market, but we have a perfect power over beasts coming into the market.

883. But not in the sheds?—No; we have no power beyond the market itself. The Government inspectors of course will take the matter in hand now.

884. You say that these beasts go away to be slaughtered. Have you any security except the cutting of the hair that they are slaughtered?—None whatever.

885. Is it certain that they are all slaughtered in London?—No, but they are slaughtered immediately, and I have no doubt that many of them are sent not only to the butchers round about London, and to different places, but to Gosport, Portsmouth, or Plymouth. Last Monday week 22 beasts were sent to Highgate, 11 to Middlesex (the drover refusing to say where—his number was 459), three cows to Hampstead, 17 beasts to the York Road, 7 to Frome, 22 to Hampstead, 23 to Finchley, 29 to Hampstead, 10 the man refused to say where they went to, 15 the man refused to say where they went to, 150 went to Plymouth, 94 to Aldershot, 75 to Rochester, and 14 to another person as to whom we did not know where he lived. That was on the 2d of October.

886. Have you any security as to the time at which a beast is slaughtered?—We have no possible means of doing so, for as soon as they leave the market our power is gone.

887. Practically would they be all slaughtered in a day or two?—I believe so; they would not be kept very long.

888. You have taken precautions, as well as you can, as to not admitting beasts which are diseased into the market?—We have.

889. Can you suggest any precaution which might be taken to prevent the market becoming the means of spreading the disease, supposing that it still finds its way into it?—I think that the slaughter of the animals has had such an effect upon the question, and believing that the disease is more found amongst cows than any other beasts, in my opinion there is now practically no difficulty, for if they are slaughtered within a day or two I think that no great harm is done. Latterly the market has been singularly free from the disease, and certainly the disease is decreasing in and around London.

890. Then you would not be prepared to suggest any means for greater security that the beasts should not be sent down into the country in the manner which you have described?—I am afraid that, looking at the magnitude of the number, it would be impracticable to slaughter them upon the spot. At the slaughter-houses there are something like 1,200 to 1,400 slaughtered every week. Perhaps in the slaughter-houses they might manage to slaughter more, but not all that are sold in the market.

891. It occurs to one naturally that it would be so much better if these cattle were slaughtered somewhere in London, and the meat sent down to the country. You think that that could not be done?—I think that practically it is working itself round to that thing. We now find an immense quantity of meat coming to London from slaughter-houses in the country, from Leeds and other places, where there are very large slaughter-houses. We find that that is done now in preference to driving beasts, but in foreign places of course it would be impracticable.

892. You cannot suggest any regulation by which the slaughtering upon the spot could be secured?—I have not directed my attention to that point, and I should like to do so before answering the question.

893. You say that more cows were slaughtered than oxen at first?—Yes.

894. I suppose that that is one of the grounds upon which you infer that the disease is bred in London, and not abroad?—Yes.

895. You say that at one time 200 beasts were diseased in the market; can you state the proportion of those which were foreign and the proportion which were English cattle?—I believe that most of them were Irish cattle. They came from Ireland, and partly from Norfolk.

896. They had this Rinderpest?—I was told that some 20 or 30 gave unmistakeable signs of having this disease, now called the Rinderpest. Of 120 or 150 (I forget the number now) a great proportion showed symptoms of the disease, but our men were not sufficiently satisfied of it to direct them to be all slaughtered.

897. Could you get us information as to the numbers from different countries which had the disease?—I could refer back to my report, and get it.

898. But I understand you to say that the people were not sufficiently skilled at that time to distinguish the disease?—I do not think that now half the inspectors know what the disease is. At that time certainly many of them did not know anything at all about it.

899. Then we cannot get any accurate information about it; the disease might have been taken for pleuro-pneumonia?—No doubt many of the animals were in the first instance affected with the disease, and many of them were passed because the inspectors thought that it was pleuro-pneumonia, and that was where the difficulty of the inspector was.

900. (*Dr. Playfair.*) Have you any return of the nations from which foreign cattle are imported?—We have at the market an account of pretty nearly every port or country from which foreign cattle arrive in London.

901. Could you furnish us with a return from the 1st of June to the end of July of the different places

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from which cattle came from abroad ?—I can furnish you with it, but not at this moment.

902. Are you aware that the disease is prevailing in Hungary ?—No, I have no official notice of it.

903. Then you are perhaps not aware whether the Hungarian cattle imported have shown symptoms of the disease ?—I may say generally not. I have seen a great many of them myself, and I have had my attention particularly directed to them, and have asked the question over and over again, but up to the present moment I am not aware of the cattle from Hungary having the disease, and certainly not of any coming to England which have been stopped. Those cattle are peculiar cattle. You may by a little imagination fancy that they are some of the Bramah bull species. The Hungarian beast you may fancy with a very little alteration would make a Bramah bull.

904. How do you treat the manure of the cattle market before you sell it, or send it off from the market ?—In the very early stage of this question it impressed itself upon my mind as of so much importance that directions were given that all the manure, &c., and all things connected with it, should be kept entirely separated, and not allowed to go away from the market, but be destroyed by means of disinfectants. There is a very large space of ground there; it has been put in a place by itself, and disinfected by chloride of lime and other disinfectants; it has not been mixed with the other manure, nor been taken away, but is there at this moment. So much were we impressed with the importance, not only of the manure but of the blood of the animals which were diseased, that we appointed a slaughter-house expressly to be used for nothing else than to slaughter the beasts seized in our market, and the blood was not allowed to be sent away, but it was destroyed, with all the offal and everything else connected with it.

905. In the cleansing of the cattle market do you use disinfectants ?—We use chloride of lime to an enormous extent; we first of all flood the market from end to end; we have between 30 and 40 men employed in the market every market day, twice a week, first, to disinfect the market, and then to pour chloride of lime diluted with water about the market, over the stones, the rails, the halters, the lairs, and every part of the market, without any reservation whatever.

906. (*Mr. Wormald.*) You say that the market is flooded; what becomes of the water with which it is flooded ?—It goes into the main sewer.

907. And where does it run ?—It runs, I believe, down to Barking Creek; the Northern Outfall Sewer now goes down to Barking Creek.

908. (*Mr. Read.*) You said that you did not hear of the outbreak of the plague in the Metropolitan Market until the 26th or 28th of July. Are you aware that on the 10th of July no fewer than 200 diseased cows were exhibited in the market; have you heard of that fact since ?—I have not. I do not know how it could be ascertained. I can by reference to our books tell you the exact date; but the period when the outbreak of the disease was brought to my notice was at the last committee meeting which we had in July.

909. When you say that this large drove of 150 or 200 diseased cattle would have to be destroyed, do you mean that they were utterly unfit for human food ?—No. I have taken down a memorandum, so as to furnish you with the particulars of it; but I stated that the report made to me was, that on a certain Monday something like from 150 to 200 cattle were said to be infected, that something like 20 or 30 (my memory does not quite serve me) were absolutely diseased, seized, and destroyed; but that a great number, a drove of 120 or so, were thought to be affected by the disease, but in so slight a degree that our inspector did not order them to be slaughtered, and they were allowed to go from the market. I will give the Commissioners the exact particulars of it.

910. How many of the cattle which are sold in the Metropolitan Market do you suppose are sent out to be slaughtered in the provinces; about 500 on each market day, or a much larger number ?—That is a difficult question to answer. If I take the date of last Monday week, something like 500 were sent away to the provinces; but this would not give the amount, because many permitted the tails to be cut of animals which were to be sent to the provinces, and therefore I cannot answer that question without going more particularly into it. I believe that, practically, a very great majority of the cattle coming to the London market are killed for the London supply. With regard to sheep, that prevails to a very great extent, and I believe almost entirely.

911. You say that the cattle are marked for slaughter; how are they marked ? Is it in the ordinary way of cutting the hair off the tails ?—I was asked by Sir George Grey the question on Saturday. I informed him that the mode of marking beasts generally pursued in the Metropolitan Market when sold to butchers is by clipping the hair off the end of the tail; that when sold to dealers and others the hair is left on, and such are then marked by a private clip, or by a piece of the hair being tied round the tail; but now that is not allowed to be done. Then, as to sheep, they are marked with red ochre on the back or head. Calves are marked by scissor clips on the back or sides. Pigs are marked with red ochre or with scissor clips. But the beasts are always marked for slaughter by having the hair cut off from the end of the tail.

912. As they always have been done ?—Yes; and no butcher will buy them in that way unless he intends them for slaughter. He cannot sell them again.

913. Do you think that the supply of dead meat to London from the provinces increases ?—Yes, very much indeed. I have not the return before me, but it increases very much. Means are now being taken, and have been taken for some time past, to slaughter the beasts in the provinces and send them to London, so that we are now engaged in providing a dead meat market in the old Smithfield, and we are making a very large provision for the sale of meat.

914. Would you think that that in a measure would account for the diminished supply of live stock from the provinces ?—No, not really so, because up to the time of the outbreak the supply from English places was very large, and the supply of dead meat was large also. I can give you that return.

915. You say that one diseased sheep was seized; was it affected with the plague ?—It was supposed to be so; the sheep was sent to the college over which Professor Simonds presides, and a report can be given you; our inspector is here, and he can give you the report. He told me yesterday morning that it was sent for a post-mortem examination; it was supposed that it was diseased.

916. Have you had many seizures of diseased sheep ?—None before that I remember.

917. You stated that the dockyard contractors frequently, and almost generally, selected the foreign stock to supply the dockyards ?—For some considerable time past they have, for reasons best known to them, chosen to select (so I have been told) the foreign beasts as being more healthy than generally the English beasts have been.

918. Do you not think that that is from their comparative cheapness, rather than from their better health ?—I cannot answer that question. I know that the Government inspection is very rigid, and that they will have nothing but the best meat; they are very particular in what they take, and we are now getting some splendid beasts from abroad; they get them from abroad equal sometimes to our best fed beasts.

919. But still a very great majority of the cattle coming from abroad are cheaper than English ?—Yes,

far cheaper; but latterly they have been very much improved, and some of the Spanish beasts in particular have come up in a wonderfully fat state.

920. You attribute the outbreak to the London dairies in a measure, and you say that, in consequence of the general spread of the disease in a few weeks through the London dairies, you think that it must have been spontaneous. Do you think that it is possible that it first appeared in the Metropolitan Market, and that by the large purchases which are made every week in these dairies it might by that means have been conveyed simultaneously to different dairies?—Of course it is open to that view of it; but singularly enough for many weeks nothing was heard of but of females or cows affected by the disease, and those were in dairies which had not been near the market, nor had had cattle brought to them. That is the difficulty.

921. But the mere fact of cows in the vicinity of the metropolis being affected is surely just from this, that cows are constantly kept, and that bullocks are held only a day or two to be slaughtered?—Yes; bullocks are very rarely kept in the London dairies.

922. They are not kept in London except simply for the purpose of slaughter?—Certainly.

923. Therefore, as far as regards the metropolis, you would have nothing but cows which would continue for any length of time?—No; but I cannot understand how these cows in the various sheds should simultaneously manifest the disease when those cows had had nothing whatever to do with the market in any way whatever.

924. But at the same time why cows are affected in the metropolis would be that the bullocks or the oxen which are in the metropolis have not had time to manifest the disease, as they had been killed?—Probably so. I will admit that it is probably open to that view of it.

925. (*Viscount Cranborne.*) I understood you to say that you estimated the number of animals sent to the provinces to be slaughtered at about 500?—I guarded myself. The return last Monday week gave me 500 unmarked in the tail, but many left marked.

926. Would there be any serious difficulty in erecting slaughter-houses sufficiently large for the slaughter of those animals?—No; we have provision and every accommodation there for that purpose.

927. You could, without any great difficulty, slaughter all that required to be slaughtered; all in fact coming into the London market?—There would be only the time required to erect the slaughter-houses.

928. Is there ground where those slaughter-houses could be erected?—Yes; we have ground which might be set apart upon the system of the abattoirs in Paris, so that all animals should be slaughtered there. That was one of the intentions of the city authorities some time back; but it is a difficult question. We could not ourselves undertake to slaughter; all we could do would be to provide slaughter-houses and conveniences to slaughter.

929. If it should be thought right to permit no cattle to be taken away from the market, and to provide that all brought there should be slaughtered, there would be no difficulty in finding room for that purpose?—None whatever. There is no doubt abundance of room within the precincts of the market for anything of that kind.

930. If such a prohibition were issued, do you think that the supply of London food would be seriously interfered with?—I think not, for this reason, that it might cause a greater quantity to be slaughtered in the provinces and sent up by rail, which is now being done, and is found to answer very well. If you order that all cattle shall be slaughtered, you then will in effect be slaughtering principally foreign beasts which come there; but the provinces will still send up their meat as they do now in very good condition, so that I do not think that there would be any difficulty there.

931. It would not have any tendency to alter the general level of prices in the market?—I think not. Of course it is a large question, and a question involving very general considerations, but I do not see that it would have that effect.

932. Has the last Order in Council had any effect in checking the importation of cattle?—None whatever; we have had more beasts come in during the last few weeks than in any corresponding weeks for many months past.

933. Do you anticipate that as soon as it is known in distant countries it will tend to check the importation?—I have asked the question of several foreign importers whom I know, and they say that they are so satisfied that their beasts are healthy and well that it will make no difference whatever.

934. Are the inspectors whom you employ persons who have had an education in veterinary science?—The inspector whom we have appointed in the market has obtained his degree under Professor Simonds, and is thoroughly qualified as a veterinary surgeon.

935. And can the same be said of his assistants?—Yes, of two of them; of the other two I am not quite so certain, but they are all four very qualified men; two of them are veterinary surgeons.

936. Do your inspectors profess to be able to know, not only whether a cow is diseased, but whether she is in a condition to convey infection?—I should like the inspector to answer that question himself; our inspector says that he should be able to do so, but that is a question which I can hardly be supposed to answer so well as the inspector.

937. Can you state the number of animals which have been destroyed under the order of your inspectors?—I can do so, but not so well as the inspector; and I can send you that return.

938. (*Mr. Read.*) Have you any idea how many of the cattle which are slaughtered in London are slaughtered at the Metropolitan Market?—I think I have answered the question. A few months ago, before this outbreak took place, it was necessary to make some arrangements for the inspection of the slaughter-houses, and I made it my business to inquire generally as to the number of animals slaughtered, and I then found that it was something like 1,200 to 1,400 per week. Since that time more have been slaughtered; we can give you the account, although the slaughter-houses are not absolutely under our jurisdiction, being let to persons who slaughter for anyone.

939. Do you not think that you could kill the surplus now without having any fresh slaughter-houses erected?—No; we could not kill 8,000 a week.

940. I mean the surplus which are sent out to the provinces, which would probably not be more than 1,000?—I should like to make inquiries before I answer the question.

941. Will you consider the question?—I will.

942. (*Chairman.*) Is there any other observation which you wish to make?—There is an observation or two that I should wish to make upon a point that has recently been before us, that is, the subject of sanitaria. We entertain a very strong opinion in the city of London, and when I say "we," I may mention that I represent the Metropolitan Cattle Plague Committee. I represent, besides, the Markets Committee; and I represent also the different portions of the metropolis. This committee is formed of gentlemen and medical officers of health of each of the metropolitan districts, and members of the district boards of the metropolis, and very strong opinions have been entertained by them latterly that means should be adopted, and which might still be adopted, with a view to the cure of this disease. We feel that while the Order in Council permits cows or animals to be moved from any shed to a slaughter-house to be killed, the same means might have been adopted to have removed them from the cattle sheds to places where they might have been treated; and had we had permission before, I have no

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doubt that long before this we could have reported a successful result; as it is, we have not been permitted to do it, except in a manner which precluded us from doing as we desired, and this so trammelled us that we have determined to dissolve the committee and throw the onus upon the Government, or, I should say, upon this Commission. It is a subject that has received very grave consideration by us as to what we think might be done and ought to be done.

943. (*Dr. Quain.*) Would you not feel afraid of the risk that would be incurred in transferring these animals from place to place in the way you have suggested?—We do not think there would be any risk; we think that the cattle might be conveyed in ambulances or carts or vehicles provided for that purpose, taking of course great care that they should not have any means of communication with any other cattle. We think that there would be much less danger than is incurred now in moving cattle from the sheds to be killed at the slaughter-house at Islington; and I sincerely hope that before this Commission closes its inquiry it will be able to point out some means whereby this suggestion may be not only entertained but carried to a successful issue. We think that it is deserving of the gravest consideration, and any information which I or the city authorities can furnish to the Commission will be most cheerfully and gladly given.

The witness withdrew.

J Simon, Esq.

JOHN SIMON, Esq., (Medical Officer of the Privy Council, F.R.S., and Surgeon of St. Thomas's Hospital,) examined.

944. (*Mr. Lowe.*) You are the medical officer of the Privy Council?—Yes.

945. Are you prepared to give this Commission any information as to the subject of their inquiry?—I am afraid I must represent myself as one of the laity in respect to steppe-murrain. I cannot pretend to any special knowledge of cattle diseases. The interest I have taken in the present disease has of course been very great, both because of its pathological importance, and because of its importance to the country. But the kind of experience of the disease which skilled veterinarians ought to have I cannot pretend to possess.

946. What means have you taken to inform yourself upon this subject; it is not the first time, I believe, that it has come before you?—I have read much about it, and about a couple of years ago I had occasion, as medical officer of the Privy Council, to look generally into the question of cattle diseases. During the present epidemic I have seen some of the sick beasts.

947. In the recent outbreak?—Yes. I have also attended some of the post-mortem examinations, and have done what I could, as a looker on, to inform myself on the subject.

948. What do you consider to be the nature of the present disease among cattle?—In medical language one would call it a fever.

949. Is it identical with any type of disease with which you are acquainted?—It is clearly, I believe, the steppe-murrain.

950. Do you entertain no doubt upon that?—If, speaking hypercritically, I might perhaps express a shade of qualification as to minute differences, and say that there may be, from differences in the breed of the cattle, and from differences in the climate, and so forth, little differences in our English manifestation of the disease; but I have no doubt, substantially, that the disease is steppe-murrain.

951. Have you formed any opinion as to the origin of the disease in this country?—Proof on the point is now, I think, impossible. But though I cannot prove that the disease was imported, I think there can be no reasonable doubt upon the subject.

952. You do not believe that it is indigenous?—No.

953. Will you state to the Commission why you believe that it has been imported, and that it is not indigenous?—It had been out of the country for 120 years, and I understand that the outbreak here followed after this long interval the first direct communication in the way of cattle traffic with Russia, where the disease is always present.

954. Have you any view as to the manner in which the disease has become diffused over the country?—I suppose that among that much-discussed cargo from Revel, and in that section of it which afterwards travelled from Hull to London, there must have been a beast or beasts in the incubatory stage, or with mere premonitory symptoms of the disease, or with the disease in a very mild form,—that, in a word, the Revel cargo was diseased, though not in a degree to attract notice. I suppose that infection was thus brought into the London Cattle Market, and it must have spread from there of course with immense rapidity. Apparently it first got into the London dairies, and the animals, as they fell ill, were sent to the market, and each animal so sent to the market no doubt infected swarms of others. Before the disease had made anything like its present progress in the country, two well-known medical gentlemen, members of my profession, and one of them employed by our office, visited the Metropolitan Cattle Market to see what was going on, and they counted on that occasion 20 animals in the different stages of the disease, any one of which animals could have infected numberless others.

955. Will you give the names of those gentlemen?—One was Dr. William Budd of Bristol, and the other Dr. Thudichum.

956. That discovery alone would appear to be sufficient to account for it?—It would be sufficient to account for any amount of steppe-murrain you like. To have seen one animal there would account for an unlimited diffusion of the disease, but they saw 20 in one day. I mention this merely as an illustration of the enormous facilities which must have existed for spreading the disease, when so many as twenty well-springs of contagion could be counted in a single market.

957. I gather from your evidence that you think the disease is exceedingly contagious?—Yes.

958. Do you think it can be communicated in any other manner than by contagion?—Do you mean by direct contact?

959. I mean what you understand by contagion, contact with a diseased animal, not actual touching, but coming within its influence, or within reach of its exhalations; is it epidemic?—With similar human diseases I do not know "epidemic" apart from "contagious." I believe steppe-murrain to be in the highest degree contagious, and in the sense of being communicable from sick animals in various direct and indirect ways.

960. Have you formed any opinion as to the possibility of curing the disease?—Those who have had the largest experiences of it, the Germans, particularly the Austrians and Prussians—and they are very accomplished veterinarians, I believe I may say the most accomplished in Europe,—they and the Russians have always failed in curing the disease; they have had no success against it whatever. It seems probable, I think, that they find themselves in the same position as we do in relation to the small-pox or scarlet fever, or typhus fever, or typhoid fever of the human subject. For these diseases we have, properly speaking, no *cure*. Our treatment is purely expectant, dietetic, and palliative. They may be bungled by bad treatment and be made worse, no doubt. But their nature is to run a certain course, which we have no means,

at present, of arresting; and each of them, notwithstanding the most skilful and discreet management, will be attended with a certain fatality. The veterinarians are in a similar plight with regard to steppe-murrain. They have no means of cutting it short. It runs its typical course in the diseased animal. Do what they will, the disease will have a very large fatality—so large a fatality, that the common opinion of the veterinarians of Germany and also of France, but especially those of Germany, seems to be that it is not worth while ever to treat it, and that it is better economy to kill the beasts.

961. Do you incline rather to that opinion?—As regards national policy, certainly.

962. Have you considered the question of inoculation with a view to cure?—The continental experience, I believe, has uniformly been that there is no use in inoculation. And the common objection must be remembered (which has been held to be valid against human inoculation of small-pox), that practitioners would diffuse the disease enormously by resorting to inoculation.

963. You are aware, no doubt, of the present measures which have been taken for the suppression of the disease by the Privy Council?—Generally I am.

964. Do you think that if matters are left to go on as they are going on, we shall see the end of this disease soon?—Certainly not.

965. What do you anticipate will happen?—We have not got materials making a positive prognosis. It is not a matter in which one can speak dogmatically of the future, but when the disease was here before it prevailed for 10 or 12 years. I cannot expect that it will die out; I do not know why it should. Smallpox came to us once as this disease has now come to our cattle, and it has not died out; and the same may be said of various other diseases which have not died out, and I should not expect that it would in this case.

966. Do you consider the circumstances of the country, from being more thickly populated and more fully stocked than it was a hundred years ago, more unfavourable to getting rid of the disease?—I consider the circumstances of the country, in the far greater facilities which exist for communication from one part of the country to another, to be far more favourable than the circumstances of the country a century ago for the continuance of the disease.

967. You look upon it as a very serious matter?—I look upon it as most serious.

968. Have you turned your attention to any remedy that might be devised?—I can only pretend to speak from a medical point of view, and there may be overwhelming objections on the part of the patient to the particular remedy that is to be recommended. In many cases of human disease, where eventually amputation must be resorted to, the patient would not at first imagine the necessity for such an operation, and would vehemently refuse his consent to it at those early stages where yet his surgeon can plainly see what must come. And the surgeon hesitates to speak till the patient feels the real pressure of the disease. So it is here. I think I can see very clearly that no moderate and popular means will stop this disease.

969. Can you tell this Commission, supposing we could do just as we liked, what measures ought to be taken with a view to getting rid of this disease?—First, absolutely to stop the movement of cattle.

970. Anything else?—For a limited time absolutely to stop the movement of cattle, of course including importation. After the lapse of a fortnight there would be no new cases of the disease, except in places where the infection already was, and there the police of the country must see it out, and see that the places be properly disinfected.

971. What do you mean by "see it out;" do you mean that they should kill the cattle, or let them die?—Probably at first it would be almost a matter of indifference to the public which of those two courses was taken. But certainly after some time, when the disease was getting comparatively rare, there might be great advantage—that is, great economy of time, in killing off simultaneously all the infected stocks.

972. How long would you suspend all movement of cattle?—I should think that three or four months would be sufficient, if the principle were universally and rigidly acted on. Otherwise the process might be protracted indefinitely.

973. For instance, would you not allow a cow to be sent to a bull in order to propagate the breed?—Speaking generally, no. It might be necessary, in working the plan in a district, to give to the authorities who superintended it the power of making limited small exceptions in certain cases, under strict guarantees against abuse and against mischief; but speaking broadly there must be, if such a plan is to attain its object, an absolute stoppage of the traffic in live cattle. Of course I do not pretend to judge how far the police arrangements of this country would permit that to be thoroughly well done, nor do I pretend to judge what the cost of it would be. Doubtless it would be a very serious matter for the country, but the evil is of enormous magnitude, and I do not see the ghost of a chance of getting rid of it unless some such treatment be adopted.

974. Do you think that that single measure would be sufficient?—I have no doubt that it would suffice, if, as a matter of government, it could be carried into effect.

975. If that should not be thought a practicable measure, it would be, in your view, the nearest approach to a remedy?—Yes.

976. You do not approve of killing the cattle?—Certainly I do when you are dealing with the disease in any well-defined small area, and when the killing can therefore be a conclusive process; but when the disease is diffused over the whole country, especially if you continue also to import, what is the use of your killing? You are having an unlimited succession of new patients, who, as fast as they land, take the disease.

977. (*Dr. Quain.*) Your impression is that the disease is a specific fever, and that it is contagious?—Clearly.

978. And probably it is now of less importance to trace its origin than to deal with it as an established fact?—Far less; the question of origin is now a question of historical interest.

979. Even if this Commission should fail to trace out the origin of the present disease, you are satisfied that it could not arise endemically, or generate itself here?—I should not wish to pronounce on what is possible and what is impossible in this matter. But, with the permission of the Commissioners, I will read from my Sixth Report, as Medical Officer of the Privy Council, a passage (pp. 52–53) which, though written about human disease, applies, I think, to the present question:—"The several zymotic diseases are ætiologically quite distinct from one another. . . . How their respective first contagia arose is, as regards nearly all of them, quite unknown. This, in pathology, is just such a question as in physiology is 'the origin of species.' Indeed [regard being had to questions which are still under scientific discussion] it is hardly to be assumed as certain that these apparently two questions may not be only two phases of one. Hourly observation tells us that the contagium of small-pox will breed small-pox, that the contagium of typhus will breed typhus, that the contagium of syphilis will breed syphilis, and so forth,—that the process is as regular as that by which dog breeds dog, and cat cat, as exclusive as that by which dog never breeds cat, nor cat dog; and, *prospectively*, we are able to predict the results of certain exposures to contagion as definitely as the results of any other chemical experiment. But, *retrospectively*, we have not the same sort of certainty, for we cannot always trace the parentage of a given

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" case of small-pox or measles. And here, notwithstanding the obvious difficulties of proof either " way, some persons will dogmatise that there must " have been an overlooked inlet for contagium, while " others will dogmatise that there must have been in " the patient's body an independent origination of " the specific chemical change. Presuming (as may " pretty confidently be presumed) that in the history " of mankind there was once upon a time a first " small-pox case, a first typhus case, a first syphilis " case, &c., and admitting our entire ignorance as " to the combination of circumstances under which " those first cases respectively came into existence, " we have no scientific reasons for denying that new " 'spontaneous generations' of such contagia may " take place. But as regards some of the diseases, " there are conclusive reasons against supposing that " this is of frequent occurrence. Where we can observe isolated populations, we find very long periods " elapse without any new rise of certain 'species' of " disease. For instance, in 1846, the contagium of " measles was imported by a sick sailor into one of the " Faroe Islands, and led to an epidemic which attacked " more than 6,000 out of the 7,782 inhabitants, " sparing only the persons who previously had had " the disease, and 1,500 who were kept out of reach " of contagion; but before that time there had not for " 65 years been in those islands a single case of " measles." It is the same thing with our steppe-murrain. We know that for 120 years it had not been present in this country—that, at least for that time, it had shown no faculty of "spontaneous generation" here. Nor did any one ever talk of its "spontaneous generation" here till after we had, for the first time, come into direct cattle-traffic with the country where its contagium is always current. To talk of testing "spontaneous generation" then was as if one talked of testing "spontaneous combustion" amid a continuous discharge of fireworks. My report gives a second illustration, which I may quote, in addition to that experience of the Faroe Islands:— " England has 627 registration districts. During " the ten years 1851-60 scarlatina, small-pox, and " measles were (as usual) prevailing more or less " throughout the country, producing among children " under five years of age an average annual mortality " of 802 per 100,000; *i.e.*, by scarlatina 419, by " small-pox 103, and by measles 280. In 626 of the " registration districts there were deaths (and, for the " most part, in not inconsiderable quantity) from one " or more of those causes;—not quite invariably from " all of them; for 43 of the 626 (thanks, no doubt, to " vaccination) had not any death by small-pox, and " among the 43 districts which thus escaped mortality " by small-pox, there was one which also had not even " a single death by measles;—but, with these exceptions, all the 626 districts had deaths from the " three diseases—deaths by measles, deaths by small-pox, deaths by scarlatina. But the 627th district " had an entire escape. In all the ten years it had " not a single death by measles, nor a single death by " small-pox, nor a single death by scarlet fever. And " why? Not because of its general sanitary merits, " for it had an average amount of other evidence of " unhealthiness. Doubtless, the reason of its escape " was that it was insular. It was the *district of the* " *Scilly Isles;* to which it was most improbable that " any febrile contagion should come from without. " And its escape is an approximative proof that, at " least for those ten years, no contagium of measles, " nor any contagium of scarlet fever, nor any contagium of small-pox, had arisen spontaneously " within its limits. I may add that there were only " seven districts of England in which no death from " diphtheria occurred, and that, of those seven districts, " the district of the Scilly Isles was one."

980. With regard to the knowledge possessed on the pathology and treatment of the disease, is that sufficient as recorded, or is it desirable that this Commission should institute careful inquiries into the subject?—I think it would be much to be regretted if so excellent an opportunity as offers itself should be lost without a scientific investigation of the disease. I may say that at the moment when the Commission was determined upon it was under consideration in the Council Office to undertake some such inquiry. Of course, however, your object is to stop the disease, and I believe it will be easier to stop it than to understand it.

981. You have suggested, with a view to stopping the disease, that the movement of cattle should be prevented; do you think there would be any risk in the carriage of dead meat?—Precautions would be of course necessary. If meat were killed in a steppe-murrain slaughter-house, and carcases were sent out with dung adhering to them, that would no doubt propagate the disease; but with decent precautions I think there need be no fear upon this head.

982. Having arrested the disease by forbidding the movement of cattle in the country, how would you prevent its recurrence by the importation of cattle hereafter; would you recommend that there should be a period of quarantine, or a system of inspection?—Quarantine, I imagine, is pretty nearly impossible in this country; but there ought to be no traffic whatsoever with the countries in which the steppe-murrain prevails. I apprehend that a fortnight's quarantine would be, practically speaking, impossible; and even if it were not impossible, it might not be a sufficient precaution to answer the purpose. We know that human quarantines do not answer very well.

983. It might be very difficult to ascertain the existence of steppe-murrain abroad so satisfactorily as absolutely to exclude cattle from the regions where it existed; would it not therefore be safer to have the cattle landed in this country, incurring the additional expense of keeping them for a fortnight under quarantine before they were scattered through the country?—I can hardly conceive a case in which it would be prudent to export cattle from Russia, with or without quarantine.

984. It is now prevailing in Holland and Belgium and Hungary?—Yes. If it is indispensable to import from a country in which the disease is present, quarantine may be necessary. But in any such case, the importation of dead meat rather than of live meat would be preferable, I should think.

985. (*Viscount Cranborne.*) You would forbid altogether the importation of foreign cattle during the period when the movement of cattle has been forbidden?—I would either forbid it altogether, or I would have them slaughtered at the point where they were landed, and surround that place with a variety of lazaret-precautions.

986. It has been stated in evidence that a large proportion of the cattle are now foreign, and considering the effect which the withdrawal of such a number would have upon the food of the population, would it not be better that there should be precautions taken at the Metropolitan Market, and that the animals should be slaughtered there, rather than forbid importation altogether?—The Commissioners, of course, will have infinitely better suggestions made to them than I am able to offer as to whether dead meat should not be imported rather than cattle, —whether, namely, the cattle might not be killed on the other side of the water; if practicable, I think that would be the better course; but, failing that, I should say that slaughtering cattle in the Metropolitan Market ought, if possible, to be avoided, and that it would be better to have special slaughtering places established at a distance from the centre of population.

987. At some isolated place?—Yes, some place down the river.

988. You have discouraged the application to this country of a plan which has been called the stamping out of the disease; should you extend your disapproval to the case of Ireland?—In Ireland I think there is every opportunity—at least I should hope there is—of "stamping out" the disease, if it should arrive there. I am not aware whether it has or

not; but assuming that it has not, and supposing that great vigilance were used, and of course under existing circumstances it is used in Ireland, the first beginnings of the disease would be seen, and then I think it might probably be "stamped out."

989. You think that a cordon might be established, and the animals within that cordon might be killed?—I should think so. There might, however, be difficulties that I cannot foresee, for I do not know the circumstances of the trade in Ireland. If there is a Dublin cattle market, and if the first importations had been to the cattle market, perhaps a number of animals would have been infected, and it might be a month afterwards before the Irish Government would know the extent of the mischief in the country, and by that time it might be difficult for the Government to "stamp it out."

990. Have you formed any opinion as to the period of incubation of the disease?—It varies, I believe, according to the mode of the introduction of the poison; where the disease is inoculated I believe it is four or five days, but where it is caught in the usual manner I believe it is from about eight to ten days.

991. Would you say 10 days as the outside limit?—No; for practical purposes, I should be reluctant to say anything under 14 days.

992. You spoke as a matter of policy of the advisability for the future of not importing cattle from any countries where the Rinderpest existed?—Yes.

993. It has been stated in evidence that it is frequently to be found in Hungary, and that Hungarian cattle are constantly coming across through the German ports. Would you extend your prohibition to those German ports?—No, usually not, for I believe the German authorities are very wide awake as to the danger of Rinderpest; it has been the tradition of this country for a long while that our safety, as indirect importers from Russia, has depended upon the vigilance of the authorities in Prussia and Austria, and the steps they have taken against the disease; and although Austria may tolerate a certain amount of steppe-murrain in Hungary, the authorities become very active indeed when there is any extension of it beyond the remoter parts of the province.

994. Do you know what precautions are adopted, and whether they are extended to the cattle trucks passing through—that is, to the through traffic of Prussia and Austria, as well as to the local traffic?—I do not know.

995. It has been stated in evidence that the most extreme precautions are used with regard to cattle that are to be brought into the country; but you cannot state whether the cattle that are carried through are inspected with equal care?—No, I cannot.

996. (*Dr. Parkes.*) Do you think that any effect has been produced on the public health by the use of meat which has been obtained from beasts that have suffered from Rinderpest?—I have seen no evidence of it.

997. Or from the use of the milk?—I have had no evidence of it. Such book-information as I have would lead me to suppose that it is not likely to be a matter of much importance. From Professor Brücke, of Vienna, two years ago, I learnt that during a recent epidemic of steppe-murrain in Bohemia, the authorities, according to their practice, had the diseased animals slaughtered and buried; but that, as fast as the beasts were slaughtered and buried, the populace dug them up and ate them, and that they were none the worse for it. That is not a tradition, but is on the authority of Professor Brücke, of Vienna, who is a very great light in medicine, a great physiologist. Then in the French accounts of this subject (for instance, in Lévy's *Traité d'Hygiène*) there will be found plenty of cases referred to, in which the meat has been extensively eaten without doing any evident injury to the public health.

998. But no case of that kind has been brought to your notice?—No.

999. Would you suggest that the diseased animals after being killed should be buried, or after what you have stated why should not the meat be used for food and the hides preserved?—It would certainly lessen the inducement to rid the country of the disease if the meat were to be sold.

1000. Looking at the enormous loss to the country of every beast that is affected with Rinderpest, if it can be shown that the meat when consumed has no injurious effects, it would seem to be rather a needless waste to bury it all?—It would be difficult, I think, to prove to public satisfaction that the meat has no injurious effects. On present negative evidence, I would not go so far as to say that. I would only say that I am not aware of any case in which ill effects have arisen, and that sudden and obvious ill effects certainly do not arise. So far as that I would go; but I cannot answer for what may be, after a time, the effect of a continued course of steppe-murrain beef.

1001. Do you know the signs in the muscles by which the disease can be recognized after death?—Dr. Buchanan mentioned to me some time ago that he had found in the muscles the same change as that which Professor Zenker made us acquainted with in the morbid anatomy of typhoid fever.

1002. Have any reports been made to you as to the use of disinfectants in preventing the spread of the disease in any way, or upon what data did Dr. Thudichum found his memoranda upon this subject?—He founded them upon his own chemical knowledge, and upon the German regulations and experience during the many years in which the disease has been watched by the Governments of that country.

1003. In speaking of the shade of doubt which you have in your mind as to the identity of this disease with Rinderpest, I presume you entertain no real doubt?—Not at all.

1004. It has assumed in different epidemics rather different characters, has it not?—Yes, and it is partly with reference to this question that I was anxious at our office to have a long course of post-mortem examinations of the cattle; they have not been made, but the post-mortem appearances in the cases which I have seen have varied a little. For instance, in most of the cases that I saw, there was considerably more affection of the third stomach than appears to be general, according to the German reports. Those claret-coloured patches, and eventually sloughs, that form there, sometimes to a most striking extent, seem to have been more frequent here, as far as I could judge from what I saw.

1005. Have you not, in any cases which have been brought before you, found any additional evidence as to the comparative contagious properties of the discharges from the respiratory and digestive organs?—I have had no opportunity of doing so.

1006. (*Mr. Read.*) You stated that this disease was brought into the London market; have you had any evidence to prove that?—No; I said that I believed so.

1007. Can you give us the date of Dr. Budd's inspection?—I cannot give it you at this moment, but I could perhaps get it for you, for I immediately wrote a note to the Council Office to inform them of the fact. [It was Sept. 7th].

1008. I suppose it was not before the Markets Committee were aware of the disease existing in the market?—No; it was long after; it was when the disease was a matter of the most common notoriety, and in the midst of the public excitement about it.

1009. We have it in evidence that on the 10th of July 200 diseased cows were in the market, and that the Market Committee knew nothing of it until the 26th or 28th of July; your information was received subsequently to that?—At all events it was when the country was well aware that the disease existed.

1010. If imported fat cattle were killed at the outports I presume there would be no danger of spreading the disease from the meat?—I think not.

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1011. Even although the animals were infected with Rinderpest at the time, or that they had the germ of the disease in them?—Such a slaughtering establishment ought, I think, to be treated with quarantine precautions, and ought to be regarded as a sort of lazaretto.

1012. (*Mr. Ceely.*) I think you look upon the dead flesh of diseased animals as objectionable to be eaten, and very objectionable to be carried about. Might it not be a source of infection?—I cannot say that it might not be, but I have no facts within my own knowledge upon the subject.

1013. Would there not be great probability of its being a source of infection?—Undoubtedly it would be best to be on the safe side.

1014. (*Dr. Quain.*) If these cattle were killed, would not the persons who killed them themselves become the means of communicating the infection?—Of course they might.

1015. (*Mr. Ceely.*) Supposing the cattle to be diseased and slaughtered, to eat the meat might be harmless, but it might not be harmless to carry out such a system?—That is quite possible. The anxiety of the cattle owners to get rid of the disease, their motive to do so, would be greatly lessened if they could always sell their meat.

1016. Have you seen several post-mortems?—Yes.

1017. Do you or not look upon the affection of the mucous membranes as inflammatory?—I think it is inflammatory.

1018. Have you seen many ulcerations?—Yes; but where there have not been ulcerations, I think the diffused catarrhal state of the mucous membrane has been sufficient sign of inflammation.

1019. (*Dr. Quain.*) Does it more resemble influenza in the human subject than typhus fever—its depressing influence and the catarrhal discharges?—It can hardly be said to resemble typhus fever. It perhaps has more affinity with typhoid fever, more affinity in so far as it is eminently, though not exclusively, a bowel-fever.

1020. It resembles that more than influenza?—I think so.

1021. (*Mr. Ceely.*) Judging from your reading and your knowledge of the Rinderpest as it occurs in Galicia and in Russia, you think that the present outbreak in this country resembles it?—I think so; I think it is substantially the same disease, with possibly some minute shades of difference, but the same disease; I have no doubt of it. The communicability of the disease to sheep is a striking fact in the same direction. In Germany, that fact has been well established by all sorts of observations, including inoculation and experiments. And now that experience has been repeated in this country by observations as to the communicability of the disease to sheep.

1022. (*Dr. Quain.*) Has any information been obtained as to its communicability to other animals?—Yes, as to goats.

1023. And to horses or buffaloes?—To buffaloes I should suppose it to be communicable; but I have no definite knowledge of the fact.

1024. (*Mr. Read.*) And to all ruminating animals?—Probably.

1025. (*Mr. Ceely.*) Have you seen any sheep that were affected?—No, I have not been able to go to see any.

1026. (*Mr. Wormald.*) Do you believe that if the flesh of an animal having this disease were salted and kept for some considerable time, say, a fortnight or three weeks, it would be as likely to communicate the disease as fresh flesh?—I suppose that if you could disembody the contagium of the disease, and put it in salt and water, at the end of three weeks it would be inert; but I have no knowledge on that subject.

1027. (*Dr. Playfair.*) Have there not been instances of human plagues and human diseases which have frequently visited this country, but which now no longer visit it?—Yes.

1028. To what, generally, do you attribute the fact that although these plagues exist in other parts of the world, they do not take root in this country?—The question is a difficult but enormously interesting one. I suppose that the fact in its full import cannot be otherwise explained than by supposing that there are great cyclical differences of chemistry on the surface of the earth.

1029. Do you not think it a fact that the improvement of our hygienic and social habits has had very much to do with preventing plagues coming into this country?—I do not think that the difference must be attributed entirely to that.

1030. But very largely so?—Largely, perhaps, but not exclusively. Epidemics, after periods of absence, return without any ostensible deterioration in common sanitary circumstances. For instance, let this be observed with regard to diphtheria:—three centuries ago there was diphtheria throughout Europe; and then it was lost sight of for a long while; then in the middle of the last century there was diphtheria again: it prevailed considerably in England, and after a while sank again to nothing; but now, after an interval of a century, we have had it severely again.

1031. You, as a sanitary officer, in combating diseases coming to this country, attach, I presume, great importance to the improvement of the hygienic conditions of the population?—Yes, certainly, but not indiscriminately. I have no present hope that by any sanitary measure—speaking in the common sense of the word, that is to say, by any nuisance removal measures, one could get rid of small-pox. I do not know what may have been the first rise of small-pox, but I dare not suggest that by any amount of soap and water and drainage you can prevent small-pox in this country. I would beg leave, in this connexion, to quote a passage from my first Annual Report. Scarlatina had been prevailing in the town and neighbourhood of Conway, where the sanitary administration was about as bad as it could be—nuisances of all kinds abounding: but very careful local investigation had failed to show, either that the disease had been comparatively absent from the better-conditioned dwellings, or that its more fatal visitations had belonged with any marked preponderance to the worse-conditioned dwellings. And, in commenting on this fact, I observed as follows:—"The common infectious "diseases of childhood—the 'diseases which occur to "most persons once in life,' cannot, during the "present state of knowledge on the subject, be "spoken of as products of local uncleanliness, or, "without exaggeration, have the word preventable "applied to them in the sense in which it is applied "to typhoid fever, and to epidemic or endemic "diarrhœal diseases. The former diseases, whenever "called into existence (and among us, now, they never "cease to exist) appear to have their distribution "essentially determined by the intercourse of infected "with susceptible persons. Crowding and imperfect "ventilation (such as are common in the houses of "the poor, and by no means entirely absent from the "houses of the rich) directly favour this process of "contagion; the same, and, probably, other sanitary "faults render the resulting infections generally more "fatal to life than they would be under opposite con-"ditions; perhaps even they augment the suscepti-"bility to contagion; but it does not appear that any "hitherto-attained excellence of common sanitary "circumstances ensures a marked immunity from the "affections referred to, or even an entire escape from "their severe and fatal forms. Nothing is yet "certainly known with respect to the primary source "of measles, scarlatina, small-pox, and hooping-"cough. On analogy, it is quite conceivable that they "may first have arisen in the world from peculiar "conditions of domestic filth, and that similar specific "conditions may now from time to time originate "new outbreaks. But these suppositions are not yet "established as facts in science; and only in propor-"tion as they are probable can it be hoped that "common sanitary improvements, which will certainly

" banish some other diseases, will also destroy the " sources of those ordinary dangers of childhood. " With confidence, however, it may be anticipated " that, under the influence of such improvements, " those diseases, though their sources be not extin- " guished, will become greatly less destructive of life " among persons who contract their contagion."

1032. But plague was a disease of the kind that we are dealing with just now; it could be inoculated, and now it does not exist in this country; but what I want to arrive at is this: is it not important, in the present state of alarm, to effect every possible improvement in the sanitary arrangements made for the stalling of animals?—Certainly; that would be an unqualified gain.

1033. With regard to many other diseases, quite independent of Rinderpest?—Yes; I have no doubt that it would be an unqualified gain. But it would not do to promise that measures of that kind would make any difference in the existence of steppe-murrain. I suppose that the Russian steppes are very well ventilated, and yet the disease has its home, if not its birth-place, there.

1034. But the animals may be badly used and fed in their long marches?—Possibly.

1035. And may be over driven?—Possibly.

1036. There must be certain conditions under which the bodies of animals receive the contagion as well as the contagion of the virus?—Yes.

1037. Ought we not therefore to endeavour to bring the bodies of the animals into such a condition as to render them not susceptible of the contagion?—That would be most desirable indeed. But you cannot hope, I think, to do more in the matter of cows than we have done in the matter of men. And think how powerless we are to make people insusceptible of scarlet fever, or of small-pox, or of cholera, if they are to be exposed to the specific cause. We cannot do it.

1038. But you make people much less susceptible of typhus fever if you put them in well-ventilated and well-drained houses, although the typhus is there; it attacks ill-ventilated and badly-drained dwellings where there is a badly-fed population?—You, perhaps, do not render the people less susceptible of the cause, but you certainly render the cause less powerful.

1039. And when you have placed them in better hygienic conditions, typhus fever does not attack them?—If you had a cow living under model hygienic conditions, but pricked its skin with a lancet charged with the steppe-murrain virus, all the excellence of its hygienic conditions would not preserve it.

1040. Was not that exactly the experience obtained from the plague when it existed in this country, that it attacked the well-conditioned as well as the ill-conditioned, but after improvements were made in the condition of the population it vanished altogether?—Typhus, you know, attacks the physician of the Fever Hospital as much as it attacks the poor people who are brought to the hospital.

1041. Certainly, when the virus is once established; and what I wish to know from you is whether we might not get into such a condition that the virus will not establish itself?—No doubt that would be most desirable. But, for much prospect of success, if success be in any way attainable, you must, I apprehend, begin at the fountain head of the disease on the other side of Europe.

1042. Are you aware that in 1745 and 1865 the disease on both occasions spread from the dairies and Metropolitan Market of London?—Yes. And I suppose there cannot be difference of opinion upon the point that London is a most undesirable place for dairies, if, as I suppose, the milk could be brought in from the country.

1043. In proposing to stop the movement of cattle, you spoke in a medical sense, and not with reference to whether it was practicable or not?—Yes.

1044. You think it would be desirable?—Yes. There is no hope, I should think, medically speaking, of stopping the disease unless that is done. That the disease may spontaneously die out is possible, and I cannot say that it will not do so. But it went on for 12 years before.

1045. Are you aware of Professor Röll's opinion in Vienna, that there are always epidemic conditions in the atmosphere when such a plague becomes general; he states that it is for many years on the Polish frontier without entering Austria until certain diseases appear both amongst the cattle and men, and then it becomes general. He is strongly of opinion that mere contagion will not spread it rapidly, unless the country is at the time susceptible to disease generally?—There is no doubt that the rapidity with which a contagious disease spreads in a country does vary according to external or (as I may say for want of a better word) atmospheric circumstances: there is no doubt of that. We see, in our human epidemics, that small-pox kills a great many more people in one year than it does in another, and scarlet fever in the same way. Starting from a minimum year of scarlet fever, there will be a gradual increase of the disease for several years, and at last a maximum year of perhaps enormous fatality, three or four or five times as much as in the minimum year, and then the disease will gradually fall down again to its original minimum;—the contagion meanwhile being always present in the country.

1046. When you stated that you thought that this disease might be domiciled here, like typhus fever or small-pox, you are aware that there have been repeated outbursts of it in almost all other countries in Europe, and that it has been put down?—It has been put down by a minutely organized system of police, and a system of merciless slaughtering with compensation.

1047. It appears that in the last great epidemic in Austria in 1861–62, 296,000 were attacked, 143,000 recovered, 152,000 died, and only 1,537 were killed. A Prussian professor, who was examined before the Commission yesterday, stated that the slaughtering only takes place when the number is small, and that when the number is larger, they do not attempt to slaughter?—But they have cordons, of course.

1048. Always; you would perhaps think it desirable for the Commissioners to obtain the experience of foreign authorities with regard to inoculation?—Certainly; it is on record, and the Commission could easily have it; but I cannot conceive that under any circumstances inoculation will be desirable for adoption here.

1049. (*Mr. Lowe.*) It has been stated that cows were almost exclusively the animals that were attacked in London; can you suggest any way of accounting for that?—Simply perhaps that they were the only bovine animals resident in London.

1050. No; they were not exclusively cows at the market?—But the other animals are not kept in London. They migrate through London, or are at once slaughtered in it. Cows (in use for milk) are the only stationary animals.

1051. (*Chairman.*) You have spoken of the experience gained abroad as to the cattle plague. Do you believe that foreign physicians and medical men have treated many cases with a view to curing them?—Yes. I believe that to a very large extent, and from time immemorial, the physicians of Prussia and Austria have been waging war against this disease, by all sorts of means, on the eastern frontier.

1052. Have any returns been made to the Privy Council Office which will show the extent of the disease now in England?—My colleagues may have had such returns, but I have not been dealing officially with the disease. I have been acting merely as an amateur.

1053. You have spoken of its being desirable to prohibit almost entirely the importation of cattle from Russia; would you extend that to Northern Russia as well as to Southern Russia?—I think so. I do not see why not, for unless there were a very vigilant

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system of internal quarantine in Russia, the extension would be indispensable to our safety.

1054. Do you not think that that internal quarantine is enforced there ?—I am not thoroughly informed upon the subject.

1055. Your recommendation as to preventing the removal of cattle would apply, I presume, also to sheep ?—To some extent, certainly.

1056. Do you consider that sheep might communicate the disease ?—Sheep undoubtedly communicate the disease to one another, although in a less degree, in a considerably less degree, I believe, than oxen. And morever they also (which is a very important matter) communicate the disease to oxen.

1057. Have you any account at the Privy Council Office as to the means taken on former occasions in order to prevent the spread of the disease ?—No doubt the Privy Council possesses information on the subject, but I am hardly able to speak to that ; my work is under a special Act of Parliament, and the work that is done in relation to cattle diseases has been done under another Act of Parliament.

1058. (*Dr. Quain.*) Is there any other matter to which you wish to direct the attention of the Commission ?—Perhaps I may mention one matter that occurs to me. I think it would be very useful if, when the Commission makes its final recommendations, it could suggest some plan for promoting the cultivation of veterinary medicine in its highest degree in this country. I believe that the number of highly educated veterinary practitioners in this country is not large ; and the state of the science altogether in this country, I imagine, is not as satisfactory as it might be. But means could be devised to develop it. And if I were to mention an expedient which occurs to me, it would be something of this sort,—that some few hundred pounds should be allowed annually to the University of London, to be spent on the establishment of examinations for honours in veterinary medicine ; when the candidates should be required to show themselves thoroughly proficient in common physiology and pathology,—proficient, I mean, up to a degree that would earn them honours in physiology and pathology, if they were candidates in human (instead of veterinary) medicine ; so that the honours should represent considerable scientific acquirement ; and the candidates should also have to show proficiency in the scholarship of veterinary medicine, beyond the degree which is required for an ordinary pass examination at the Veterinary College. A thousand pounds spent in that way every year would, I think, do a great deal towards improving the study of veterinary medicine in this country.

1059. (*Professor Spooner.*) Are you not aware that the students are examined in physiology and pathology by a member of the University of London ?—I am.

1060. (*Dr. Parkes.*) It has been supposed, I believe, that the rinderpest was introduced into Upper Hungary a few years ago by oxen that were apparently healthy ?—Possibly.

1061. In reading, have you met with any instances of that kind, that beasts apparently healthy, and which remained healthy, were the means of introducing the disease ?—Passing from beasts to men, we constantly see in our practice that the physician carries home scarlet fever to his children without taking it himself,—carrying the infection in his dress, or about his person.

1062. How can we prevent merely by inspection the spread of the disease ?—By any system of single inspection (as apart from prolonged quarantine observation) you cannot do so. I suppose that the cattle which brought the disease into this country (if they did bring it, as I believe they did) were incubating the disease. I do not suppose that they were evidently suffering from steppe-murrain, but that they were apparently healthy.

The witness withdrew.

Adjourned till to-morrow, 12 o'clock.

Thursday, 12th October 1865.

PRESENT :

Earl Spencer.	Mr. Read.
Viscount Cranborne.	Dr. Quain.
Mr. Lowe.	Professor Spooner.
Dr. Lyon Playfair.	

EARL SPENCER IN THE CHAIR.

Mr. W. Smith.
12 Oct. 1865.

Mr. William Smith examined.

1063. (*Mr. Read.*) I believe that you are a member of the Royal Veterinary College ?—I am.

1064. Are you Inspector of the Norwich Cattle Market ?—I have been so since 1848, and am now.

1065. Are you Consulting Veterinary Surgeon to the Norfolk Cattle Plague Association ?—I have the honour to be so.

1066. Can you tell the Commission of the three original outbreaks in Norfolk ?—I can tell the Commission of two.

1067. We will take the Reepham case ?—I am more prepared with the North Walsham case.

1068. Then take the North Walsham case. Will you give us the date of that outbreak ?—It was about the 3d of July. The beasts were upon Norwich Hill on the 1st of July ; that is to say, 38 Irish steers, and they travelled to North Walsham on the night of the same day, in connexion with about seven head of foreign beasts, into the North Walsham district.

1069. Whose property were those animals ?—They belonged to Messrs. Storey, Gee, and Watts, cattle dealers.

1070. How many of them died of the cattle plague ?—Nearly the whole. I do not know that more than three or four survived. Of the original lot of 38 Irish beasts, 36 died, and I think that four or five of the seven foreign beasts died.

1071. I understand that there are not above four convalescent ?—There are not.

1072. Did the disease spread to the farms of Mr. Bidwell, Mr. Wrench, and Mrs. Barber in the neighbourhood of North Walsham ?—Yes ; the disease spread to the farms of Messrs. Bidwell, Johnson, Wrench, Cutting, Barber and Sewell, Horsfield, Harvey, Bailey, Youngman, and Bastard.

1073. Have you any means of knowing about how many cattle died in that district ; are you aware of something like 150 ?—I should think that that would be about the number.

1074. Was there much difficulty in tracing the disease from one farm to another, in this instance ?—I think no difficulty.

1075. Then there is no reason for doubting that these cattle of Messrs. Storey, Gee, and Watts brought the disease into that neighbourhood ?—There is no doubt of it.

1076. Do you know whether or not the foreign cattle came from the Metropolitan Market?—I have strong reason to believe that they did.

1077. What is the state of the disease now in that district?—In that immediate district it is nothing like so severe as it was. I think that they have not bought their store beasts yet, they are chary of doing so. In one farm of Mrs. Barber's, I have an exact list of what she lost with the value, &c. from her own hand.

1078. In the early period of the disease, I suppose, there was great prejudice and great ignorance on the part of the farmers, and the disease spread very rapidly?—There was very great ignorance, and the disease spread very rapidly in consequence.

1079. And since better precautions have been taken, the disease has almost subsided in that district?—In that particular district.

1080. Why do you think that the disease has subsided in consequence of precautionary measures?—I think that the best measure which has ever been adopted was the six weeks' prohibition, under the direction of the Cattle Plague Association, for persons to purchase beasts.

1081. Will you take the Reepham case; will you state to the Commission the origin of that outbreak?—They were a lot of bullocks bought on the same day on Norwich Hill, and I have great reason to believe that they also came from the Metropolitan Market, and stood near some infected cows.

1082. Who bought the cattle on Norwich Hill?—Mr. Stephen Leeds of Whitwell; there were 26 of them.

1083. How many of those are alive?—I am not prepared to say; I think that the statements made with regard to those beasts are not quite correct.

1084. It has been reported that 50 per cent. of them recovered?—That is perfectly true; I know that one-half of them died, and two cows which were infected.

1085. You visited this stock?—Yes.

1086. Have you every reason to suppose that they all had the plague?—I am not prepared to say that.

1087. Did a very large per-centage recover, or escape?—A large per-centage is reported to have escaped. I have never seen that in any other neighbourhood, and I am not satisfied that it is a correct account; 13 died, and nearly half are living.

1088. You cannot account for it?—I believe that the statement is not correct; there may be an error.

1089. Did the disease spread rapidly there?—Yes.

1090. Particularly from Whitwell Common?—Yes.

1091. Are there many cases of disease now prevalent in that district?—I think not many; I am not acquainted with many.

1092. There are stock, I believe, still suffering in the parish of Ling?—I believe so; but I do not know it from my own knowledge.

1093. That I believe was introduced by a man removing his cattle from Whitwell Common?—I am not sufficiently acquainted with the matter to say. A lot was sent to Thimblethorpe, and they carried it from Thimblethorpe to Mr. Dacks.

1094. Whose cattle were those at Thimblethorpe?—They were a portion of Mr. Leeds's; eight of the 26 were sent to Thimblethorpe, five of which died.

1095. We have had before the Commission the evidence of Professor Brown, who said that cattle belonging to Mr. Ireland in that district were not within a mile and a half of any infected cattle; do you know that case?—Yes, I saw the cattle; it was the case of Mr. Ireland, of Wood Dalling. As far as I can recollect, it was so. I am not at all sure that there had not been intercommunication between them and the men attending the cattle diseased.

1096. Can you tell us positively of there having been intercommunication?—I think that there was a probability of it.

1097. Do you know anything of the Harleston outbreak?—No.

1098. On the 12th of August, the Cattle Plague Association for Norfolk was established, and one of the clauses of the rules of the association was, that no member of the association should purchase cattle in any market for the space of six weeks. You have said that that is a very wise precaution?—I firmly believe it to be a most wise precaution.

1099. During that period of six weeks we will take first of all the case of Burgh St. Peter; will you tell the Commission how that case occurred?—Mr. R. C. Hammant, of Somerleyton, in Suffolk, bought 12 Irish steers, about two and a half years old, on the 22d of July, on Norwich Hill; there were two or three others upon his farm. They all died, and only two of the Irish steers remained on the day when I was there.

1100. How did the disease spread further?—It then went to Sir Francis Crossley's. I think his farmsheds are about half a mile from Mr. Hammond's, and there it destroyed several animals; the cows were affected, and many head of stock were destroyed.

1101. We will now come to the spread to the Burgh St. Peter Marshes in the county of Norfolk?—I have reason to believe that it travelled first from Mr. Hammant's in an angular direction, to the farm of Sir Francis Crossley, and that it passed over the River Waveney and the meadow for about three quarters of a mile to the oxen of Mr. J. Hammond on the Burgh St. Peter Marshes; it either travelled through the air, or was carried by the men attending Sir Francis Crossley's stock to these marshes.

1102. Have you any reason to suppose that Sir Francis Crossley's men went to Mr. Hammant's Burgh Marsh in that direct way or in an indirect way?—Yes; I believe that they get mushrooms upon these marshes, and it is not at all impossible that some of the men who have been connected with these cattle of Sir F. Crossley's have travelled upon these marshes in search of mushrooms.

1103. What was the result of that outbreak upon Mr. Hammond's marsh?—That we were obliged to slaughter 20 of those very fine beasts; one I think was buried, and the rest were slaughtered, as soon as they were seen to be a little amiss, and sent to the meat market.

1104. Did not one bullock die from the plague, which was ordered to be buried, and did not a deputation from the Norfolk Cattle Plague Association go to the marsh, and was it not there agreed that on the next bullock sickening the whole should be killed?—Yes; except that I do not think that the first bullock died; he was ordered to be killed, and was buried; there is no doubt that he would have died.

1105. The whole of that lot were slaughtered?—Yes, and some of the others of the smaller lots belonging to the same person took the disease.

1106. And they were also slaughtered?—I believe so.

1107. What has been the result of that; has the disease spread in that neighbourhood?—I think not.

1108. You think that those rather severe measures were the means of stopping the disease?—I do.

1109. Are you aware how many of these bullocks, which were slaughtered apparently healthy were in reality affected with the early stages of the disease?—I do not know of my own knowledge, but I have heard upon good authority that five or six showed symptoms of the disease when they were slaughtered.

1110. They showed symptoms of the disease on the post-mortem examination; they exhibited nothing of the sort when they were alive?—They exhibited no particular signs of the disease while they were alive; but signs of the disease were traced after death. That is only a statement which I heard; I do not make it as my own.

1111. But it was made on the authority of the

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inspector, was it not?—I can hardly say that it was made on the authority of the inspector.

1112. Will you take the case of the outbreak at North Repps, and state how it occurred?—There had been four calves belonging to Messrs. Storey, Gee, and Watts, which had been sent from North Walsham down to the fields at Horstead, seven miles on the road to Norwich Market; these beasts contracted the disease, and three died of it, and were buried before I saw them, except that I turned them off the hill on the market as being in a state of disease a few days prior, and the other was in such a state of disease that I recommended its destruction, and it was destroyed.

1113. Those were the four calves which died at Horstead?—Yes; there was a bull which had been purchased from an adjoining farm, and two others of Mr. Ling's heifers were removed from some marshes to be taken home as usual at that time of the year, and they stayed for a night upon this occupation of Messrs. Storey's, where these calves had died. The bull shortly after getting home to North Repps exhibited symptoms of the disease; he recovered. The two heifers which were driven took the disease, and died.

1114. Did it extend any further?—I have not heard of its extension.

1115. Will you state what you know of the Wickhampton case?—They were a lot of bullocks which were bought off Norwich Hill during the prohibitory period by Mr. Ives, of Wickhampton, they were 22 Lincoln oxen—they cost 17*l.* 15*s.* a head—and they were bought at Norwich Hill on August the 19th; one was observed ill on the 22d, it was killed on the 24th, and buried, and all the rest which I saw afterwards were in a state of disease, and I believe died, or have been killed in consequence of it.

1116. Was there any extension of that disease?—Yes; and I have reason to believe that a cow at Blofield caught the disease, having been stationed within a few feet of the road where these cattle were passing.

1117. They passed through Blofield?—I believe that they did. I do not state it as a positive fact.

1118. Is the disease still extending there?—I have heard that it is.

1119. Are you aware how many stock have died in the adjoining marsh?—I am not aware.

1120. Will you tell the Commission what you know about Mr. Wardell's bulls?—I know that several of them were exposed upon Norwich Hill, and I certainly noticed their general unhealthy appearance; but as I could not perceive a positive case of the Rinderpest so as to place the matter beyond doubt, I believe that they remained. Some were afterwards killed. I believe that they all either died or were killed. On the subsequent Saturday, one was bought by Colonel Stracey Clitheroe of Rackheath, and another bull from some one else. I think that they had been home about 11 days when the bull was taken, and he died after three days suffering; only two or three days prior to their being taken they were put to the cows, and up to this date the cows remain in perfect health, they were with the bulls only about 12 hours, I think, before any appearance of the disease exhibited itself. The other bull died within about a week, from a virulent form of Rinderpest.

1121. Do you say that these bulls, when the disease was incubating in their system, were sent to a healthy lot of cows?—Yes; they assumed a very healthy appearance according to the proprietor's opinion, and they were sent to the cows.

1122. And the cows have not shown any signs of the disease since?—They have not. Precautionary measures,—a profusion of chloride of lime and other disinfectants were used by Colonel Clitheroe.

1123. The natural period of incubation has passed?—Yes, as far as we know. I am not exactly positive about the period of incubation, but I believe that it has passed.

1124. You have stated these cases to the Commission; in almost all of them I suppose that you trace the disease to newly purchased cattle, or cattle which had been drifted for a considerable way?—I do.

1125. Since the 23d of September, the day on which the prohibited six weeks of the Norfolk Cattle Plague Association expired, can you give us any further cases. Do you know the case of Mr. Arms, at East Tuddenham?—I have heard of it, and believe it to be perfectly correct. He lost all the beasts which he got.

1126. How many did he lose?—I do not know the number; six or seven.

1127. Will you take the case of Mr. Ireland, of Sall and Caistor?—Yes. He had 30 Durham oxen, four years old, purchased on the 15th of September of a dealer. They travelled from Bixley, were driven over the cattle market at Norwich at five in the morning, before the market beasts were there. They were purchased on the 15th, and sent home on the 16th. On the 19th or 20th they were found to be suffering from foot and mouth disease, the remains of which are now apparent, and some of the oxen were then affected with Cattle Plague. On the 25th one was found dying, or dead, and many of the others were affected.

1128. Do you know how many he has lost; is it not 16?—Yes; two of the beasts died of the disease, and 12 or 14 were slaughtered in a diseased state, I believe.

1129. I think that you know of other cases which have occurred. Will you state to the Commission your opinion as to the advisability of stopping store markets for a time?—You mean all the store markets of the kingdom.

1130. Not exclusively in the infected districts, but in the healthy districts as well?—I think that it would be desirable to close all the markets, unless other means of a safe character could be introduced, such as compelling persons moving cattle to present a clean bill of health for 13, 14, or 16 days before they move them from the spot where they are living.

1131. You seem to be of opinion that a great portion of our danger results from markets?—Markets, and moving cattle from place to place in railway trucks particularly.

1132. What is your opinion with respect to railway trucks?—My opinion is that they are in a most dirty condition, that they are a productive source of contagion, and of spreading the malady.

1133. You say that they are in a dirty condition; do you mean now or that they have been so?—They have been so within the last week or ten days. I have complained, and alterations are now in the course of being made.

1134. What is your opinion as to the supervision of government inspectors?—My opinion is that nothing is more wanted.

1135. How would you have that supervision?—I am hardly prepared to devise a scheme; but I think that one or more in every county, and the most intelligent and responsible person in the county, should have a supervision over the young and inexperienced men who are now acting as inspectors.

1136. When you say intelligent and responsible men, you, of course, mean members of the veterinary profession?—Of course I do, and the best of that class.

1137 Are you of opinion that the system of compensation, as afforded by cattle associations, will materially help to check the progress of the disease?—It will materially help; but the more liberal the compensation is the more available the help will be, and the more good it will do, I think.

1138. Do you not think that the lack of that compensation has been the means of spreading the disease in the early stages?—I do.

1139. What is your opinion as to the Cattle Plague extending itself to sheep?—I am doubtful on the point.

1140. Can you recommend or suggest any precautions which should be generally taken besides the stoppage of the market?—Strict inspection of the

railway trucks at every station where they are used for the conveyance of cattle, and of the lairs, and enforcing a thorough cleansing and whitewashing of the roofs, floors, and all parts of the carriages, which is not now done.

1141. Can you suggest any precautions against the spread of the disease, besides the stoppage of store cattle markets?—I should recommend the stoppage of the travelling of cattle as much as possible from place to place, especially in the infected districts, and if it could be made practicable, I believe that a bill of health of cattle, when moved, would be desirable.

1142. Are you prepared to suggest to the Commission the total stoppage of all traffic in cattle for a time?—I believe that it would be a very effective measure, but I am not prepared to give such advice. I should not like to take the responsibility of advising it.

1143. I think that in addition to your other qualifications which you have mentioned you have been inspector to the Norfolk Cattle Farmers Association?—Yes, I have been consulting veterinary surgeon and inspector to them ever since they were established in 1848.

1144. And you have seen different diseases in cattle all over the kingdom in connexion with your duties as respects that association?—Nearly all over the kingdom, and in Scotland I have been investigating pleuro-pneumonia and diseases of cattle.

1145. What is your opinion as to the general state of health of the cattle apart from the Cattle Plague?—In Norfolk I think that we are healthier than usual. In other parts a good deal of pleuro-pneumonia prevails. I might perhaps add that the foot and mouth disease has broken out again in Norfolk, and prevails very much; with the exception of this and the Rinderpest, the cattle are healthy.

1146. Would you extend your observation to sheep as to being particularly healthy?—No; sheep are particularly unhealthy; lambs in particular.

1147. (*Viscount Cranborne.*) I understand you to suggest that you would like to add to the prohibition of store markets the prohibition of moving cattle from place to place. Would you absolutely forbid their being moved from any cowshed in the United Kingdom where they are now, to any other cowshed?—Yes; in the infected districts.

1148. Your wish would be to proclaim districts?—Yes; it is a very crude suggestion; it is not a matured one.

1149. How would you carry out the requirement of a clean bill of health, which you propose, as a preliminary to the permission to travel by railway?—I scarcely propose it; it is merely a suggestion. I think that a competent person should be called in to examine the beast, and to make inquiry in the neighbourhood whether any disease within a certain number of days, 15 or 16 days, probably, had appeared in the herd, and if it had not, and if the animals were healthy, I think that they might be moved with safety.

1150. You think that no cattle should be allowed to be moved in any part of the kingdom without the certificate of a veterinary surgeon to that effect?—I am hardly prepared to go so far as that. In infected districts I think that some such rule should be observed.

1151. By a veterinary surgeon you mean a surgeon who has passed the Veterinary College?—Yes.

1152. Have you any idea of the number of those persons in practice?—I can very soon tell you the number.

1153. Would there be a sufficient number to furnish facilities for such a plan for any considerable part of the country?—Yes, I think so. There are I think 40 in Norfolk in about 900 parishes. Judging from the county in which I live I fancy that it might be carried out.

1154. Are a great number of those persons who profess veterinary science in your county passed veterinary surgeons?—No; I think not. I think that only a few throughout England are passed veterinary surgeons, a great number, I am afraid, are not.

1155. Are the 40 whom you have well distributed throughout the county, or do they mainly reside in the great towns?—I think that they are pretty well distributed.

1156. In some of the cases which you have spoken of, I have heard you speak of contagion being carried by men, and not by the movement of cattle?—Yes. I think that I have one case where it can be traced to no other cause. One of these dealers belonging to Messrs. Storey, Gee, and Watts went into a yard for the purpose of purchasing some bullocks, and one bullock, as is sometimes the case, followed him and licked his clothing. I understood, and he afterwards confessed, that he had a cow at home, somewhere in the neighbourhood of North Waltham, affected with the disease, and that he had lost other stock. In five days this bullock which licked the man in the yard was affected with the disease, and I believe died, and they could trace it to no other cause.

1157. How far was this bullock, which was supposed to have caught the disease by licking the man, from the herd which was actually infected?—I do not know; I forget the circumstances.

1158. (*Mr. Read.*) It was some few miles, as a matter of course?—Yes, it was not near, and if it had been within a mile or two it would have been near.

1159. (*Viscount Cranborne.*) Are there any cases within your knowledge of contagion by cattle passing along a railway or road without any actual communication of cattle?—The infection has been communicated across a river as well as a road. In the case of Mrs. Barber the disease was carried across a road.

1160. Have cattle passing along a railway or a road, within your knowledge, communicated the infection to cattle feeding by the side of that railway or road?—Not strictly within my knowledge. I should think that a herd of infected cattle passing along a road would most certainly affect healthy cattle in the pastures near that road, especially if there was a gate connecting the field with the road not hurdled, so as to prevent close contact. We now hurdle them up in Norfolk to prevent the disease being communicated. I have no doubt of the disease being communicated by a road.

1161. Should you say, from your own knowledge, that a larger amount of contagion was produced by cattle going into infected places, or touching infected cattle, than by its being communicated from men passing from one set of cattle to the other?—I am not prepared to say. I do not think that our knowledge is at present sufficiently extensive to answer that question.

1162. You cannot say whether men have extensively acted as the vehicle of the contagion?—I am inclined to think not extensively; but that the cattle themselves have positively affected other cattle.

1163. (*Dr. Playfair.*) Have you had any secondary outbreaks in any of those districts where the disease was stamped out?—I do not remember one.

1164. What precautions did you take to disinfect the litter and the manure in cases where the disease was stamped out?—The usual precautions which we have been adopting there,—we slash their bodies.

1165. I refer to the litter and the manure?—The litter in some cases has been burnt, and in other cases it has been well saturated with chloride of lime.

1166. And has that been found effectual to prevent the further spread of the disease?—I have reason to believe that it has; but our knowledge of this disease is yet in its infancy. We cannot speak very strongly on that, or upon any point connected with the Rinderpest, at least I should be very sorry to do so.

1167. (*Mr. Lowe.*) Have you got rid of the disease altogether?—No; we have more of it than ever. It lulled during the six weeks prohibition; but it is now

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spreading in the villages, with a rapidity which it is shocking to contemplate.

1168. Can you show exactly how it works in the market; how do the diseased beasts now come to market, in your opinion?—I think that the disease originally came from the Metropolitan Market, and that it now also comes from the Bury and other markets. There are three markets now supplying us, the Metropolitan, the Bury, and the Peterborough markets.

1169. Do you think that the Norfolk farmers supply you?—I think not, to any extent.

1170. Supposing that a man finds his beasts diseased before any one else does, is it not a great temptation to a poor man to send his beasts to market?—Yes; I have known various clumsy and negligent means adopted, I hope more from ignorance than from design.

1171. According to your experience would the hide of cattle carry the infection?—I think so.

1172. Has any fact of that kind come to your notice?—No.

1173. Why have you not renewed the six weeks' prohibition?—The president of the Norfolk Cattle Plague Association will be able to tell you.

1174. We would rather hear it from you than from him, if you happen to know it of your own knowledge?—The feeling of the dealers and some farmers was against it.

1175. They suffered very much from the suspension of the market?—No doubt; but there is a large root crop now in Norfolk required to be eaten, or it will entail a large loss upon the farmers.

1176. Was the feeling of the farmers in favour of returning to the market?—I do not feel prepared to answer the question.

1177. But the disease is now raging in Norfolk?—Very much.

1178. (*Dr. Playfair.*) Has it reached districts from which it was expelled?—I doubt very much whether it has; not to any extent, for the reason that they have not commenced buying their store beasts; they are holding off as long as they can. I am not prepared to say that it will not, and that some of the slovenly covered carcases or superficially covered pits may not produce a second outbreak. I am rather inclined to think that in some cases where burial has been negligently done it will.

1179. (*Chairman.*) How far do the regulations of the association extend in Norfolk?—Throughout Norfolk.

1180. As I understand, it is a voluntary association?—Yes; but I think that a very large portion of the Norfolk farmers have connected themselves with it.

1181. During the time of the prohibition you think that no fresh cases have arisen?—Those who did not purchase during the six weeks' prohibition had no cases; many of those who did purchase were sufferers.

1182. And they were not members of the association?—No; but unfortunately they brought the disease to members of the association. I have an instance of it to-day.

1183. With regard to the system of a separation of animals bought, you do not think that that is completely effectual?—I think that it is not completely effectual. Of course a system of quarantine would have a tendency to protect the other stock of a farmer on his farm.

1184. Do you believe that it protects the animals which were on the farm before the purchase?—I think that if the animals are kept sufficiently far from the newly purchased ones, if the newly purchased ones should become affected it may protect them.

1185. Will you state what this system of separation is?—To put newly-purchased cattle in as remote a place from their other stock as possible.

1186. For how long?—I believe 15 days.

1187. Have you any instance where stock bought and put in this quarantine communicated the disease to those stock which were before on the farm?—I believe there has been no instance, because the time is very new; I think that it is hardly up.

1188. What was the effect of the prohibition in Norwich Market?—It had a very great effect indeed. On one Saturday it reduced the number to 131 head of beasts, that was on August the 19th, and on August the 26th there were only 180 beasts in the market, and the market continued very thin until the prohibitory season had expired, varying from this number to 170.

1189. (*Mr. Lowe.*) Then what did it get up to?—I am not prepared exactly to state the number, but some hundreds. Perhaps the largest quantity on a Saturday, which is the market day at this period of the year, would be between 2,000 and 3,000 beasts, under ordinary circumstances.

1190. (*Chairman.*) Have you, as an inspector, found any diseased animals in the market recently?—Not in an actual state of Rinderpest. I had occasion to turn off 44 some time since which were in such a condition that I considered it was my duty to turn them off; they had many of the symptoms of Rinderpest. I also had occasion to turn off four beasts of Storey's for the same reason. Last Saturday I observed a general unhealthy appearance among numbers of the beasts; there was a suspicious character about them which I did not like, without being exactly able to say that it was Rinderpest.

1191. There has been no prohibition of markets or fairs at Norwich?—None.

1192. Did you try to trace the cases to London?—Yes.

1193. Did you distinctly trace them to any dealer in London?—I could not give you the names of the dealers; but the chairman of the Cattle Plague Association was with me, and we were assured that the beasts were in the Metropolitan Market the week before they came to Norwich on July the 1st. I do not remember the name of the man.

1194. It is your impression that sheep do not suffer from this disorder; but do you believe that sheep can communicate the disorder to oxen?—I believe that they can.

1195. Has there been any case in Norfolk, within your knowledge, where that has taken place?—I understand that at Blakeney that is said to be the case. I do not say that the sheep are visited with Rinderpest. I have considerable doubts about it; it may turn out to be wrong.

1196. (*Mr. Read.*) You have heard Mr. Lowe's question as to the temptation to a man to sell his stock in the market when he finds them to be diseased; do you not think that that temptation is very much reduced when they receive compensation from an association?—Very much.

1197. And perhaps that may be one reason why we Norfolk farmers have been so virtuous on this particular occasion?—I should be sorry to libel them so much as to admit this. I believe the majority of the Norfolk farmers to be persons of worth and integrity.

1198. What is your opinion as to the origin of the disease?—That it is of foreign origin; Russian origin.

1199. And highly contagious?—The most contagious that I have ever met with, and likely to be the most calamitous to this country.

1200. (*Mr. Lowe.*) If the disease goes on without any check, what will be the result of it?—That it will kill three fourths of the cattle in the country, and that eight tenths will take it. I think that it will even kill 80 or more out of every 100 that are attacked.

1201. (*Dr. Playfair.*) Has your mortality only been 80 per cent.?—I think that it has been rather more than 80 per cent., perhaps 90 per cent.; it is a very fearful calamity.

The witness withdrew.

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1202. (*Mr. Read.*) I believe that you are a member of the Veterinary College ?—I am.

1203. And you have a very extensive practice as a veterinary surgeon in Norwich and the neighbourhood ?—Yes.

1204. You have heard Mr. Smith's evidence ?—I have.

1205. Do you generally agree with what he has stated ?—In every particular I do not agree with him; but in the main there is not very great difference in opinion between us.

1206. I need not trouble you to go over the ground which Mr. Smith has gone over. As to the facts which he has given to the Commission there is very little doubt that they are perfectly correct ?—They are perfectly correct, I have no doubt.

1207. I will direct your especial attention to the extraordinary outbreak of the Cattle Plague at Mr. Harvey's at Crown Point; will you detail that case to the Commission ?—Mr. Harvey had a very serious outbreak about the 28th of August, or perhaps later; but I have reason to believe that there were two or three cases which had died something like a week or ten days before that period, which it was imagined had died from lung disease, but which I have no doubt were cases of Cattle Plague, though I did not see them. He had located on Crown Point about 120 young bullocks, from perhaps 12 to 18 months old and approaching two years. He shortly afterwards bought a lot of animals younger, 43 in number, which made something like 160 or 170. So virulent was the attack that not a single bullock on his estate escaped. I do not mean to say that they all died; but I really believe that if they had not been shot, as a great many of them were, by order of the inspector, half a dozen of them would not have escaped. I do not think that more than two would. It was one of the most virulent outbreaks which I ever witnessed in my life. I may not have seen quite so many cases as Mr. Smith has, but I have seen a very great number, and a more virulent attack can scarcely be imagined, as the result has proved. Every head of cattle from the Crown Point estate has gone.

1208. Can you at all account for the outbreak ?—I have no doubt in my own mind that it arose from certain animals, probably a portion of those animals mentioned by Mr Smith, having been located within 400 or 500 yards of Mr. Harvey's property, not immediately upon it but at not a greater distance than that. Two bulls died without any one seeing them or knowing anything at all about them, and they were buried, and the outbreak occurred very shortly after the burial of these bulls. They were seen by no one, nor were the first cases of Mr. Harvey's, for unfortunately he published a letter in the local papers in which the disease was treated rather lightly, and he was not willing afterwards when the outbreak came to let the people know much about it; but the magnitude of it was such that of course it could not be hushed up in any way.

1209. Have you any reason to suppose that what has been recently reported as to some Dutch cattle on Mr. Harvey's grounds going there had anything to do with the outbreak ?—A statement was made to me by a man residing on the spot; he assured me that very shortly before the outbreak some stranger appeared in the neighbourhood of Norwich with some Dutch cattle; they were located on Mr. Harvey's property; two of these cattle died, and were disposed of in rather a mysterious manner. The man immediately took the rest away, and they never went on to Norwich Hill at all, but where he went with them no one knows; that, however, is merely a statement.

1210. You have no doubt in your mind that either from these Dutch cattle, or from the bulls which had been on Norwich Hill, and which died in the immediate vicinity of Crown Point, Mr. Harvey's cattle became affected ?—I have very little doubt that the outbreak there occurred from the contagion or infection.

1211. Will you state what you know with respect to the Crown Point sheep ?—The Crown Point sheep commenced dying almost immediately after the lot of cattle died. There were 43 cattle which had been recently purchased by Mr. Harvey, and before all that lot died he began losing sheep in immense numbers. I was not called upon to attend them in any way, but going backwards and forwards to vist these bullocks I kept my eye upon the sheep; and, seeing half a dozen dying right and left, I was induced to watch them narrowly, and a great number of them died before anything was said about their having died. They were depasturated upon the same land which these bullocks had been feeding upon. They still continue dying. Mr. Harvey had, I think, originally something like between 2,000 and 3,000 sheep, and up to the present time I have reason to believe that he has lost fully half of them. I think that about 1,200 sheep have died; in fact, there is a cart continually going to take up the dead bodies, and they are being buried daily.

1212. I suppose you are aware that the sheep have not received the best treatment, as far as regards food ?—I am quite aware that they were living on grass, and grass only. They had no artificial food of any kind, and no roots.

1213. And I suppose that you would consider from the dry weather which we have had lately that sheep of that description, in order to be in proper health, would require some artificial food ?—Undoubtedly.

1214. They were put in the park, I believe, when it was in a very luxuriant condition ?—They were put in the park rather before the rains in July. There was not then very much herbage, but it immediately afterwards sprang up very freely indeed, and they partook of it very freely; but we had afterwards drought again, and the place has been very much scorched up until the rain of the last day or two has come.

1215. Having stated these facts as to the treatment of the sheep at Crown Point, will you state your opinion as to the nature of the disease with which they are attacked ?—The symptoms during life are as similar as they possibly can be to those exhibited by animals labouring under Cattle Plague, and the post mortem appearances are similar; there is pneumonia, and a tendency to disease of the lungs. You do not see it in every case, but in a great many cases you have congestion, and perhaps hepatization of the lungs; but the principal morbid appearances are precisely similar to those exhibited by cattle dying from Cattle Plague. It appears to be a disease of the mucous membrane throughout.

1216. Is it your opinion that these sheep die from Cattle Plague ?—I am quite sure that the cattle die from Cattle Plague, but I am not quite so certain as to the sheep. I entirely withhold my opinion until certain experiments have been carried out.

1217. Those experiments being in progress, you will not of course say anything about them ?—I can tell you the result as far as they have gone; the proposition was made last Saturday, and up to the last evening we know what the result is.

1218. What has been the result of the change of the food of sheep ?—I think that there has not been sufficient time to ascertain it.

1219. I will now ask you respecting Mr. William Birbeck's cattle at Thorpe ?—They were located on the opposite side of the river to the Crown Point cattle, and an outbreak took place. I believe that four were killed and buried, and the remainder of the lot were slaughtered, and sent to market. I have heard that several other cows immediately adjoining where Mr. Birbeck's cattle were have died, but I do not know of my own knowledge as to the exact number.

1220. (*Mr. Lowe.*) What is the width of the

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river ?—I should think that the river would, perhaps, be about 100 yards wide; it is the River Yare running from Norwich to Yarmouth.

1221. (*Mr. Read.*) You have every reason to suppose that this outbreak on the other side was caused by the affected cattle at Crown Point, and have you not also every reason to believe that there was no direct contact between one lot of cattle and the other?—There was no direct contact, because they could not in any way cross the river.

1222. There was no communication from one side to the other?—Only by Mr. Harvey sending his cows, which would pass very close to Mr. Birbeck's cattle.

1223. But perhaps not much nearer than on the other side of the river?—About the same distance.

1224. Do you know anything as to Mr. Waite's cattle?—Yes. The first case was in the opposite direction to Mr. Birbeck's, from Crown Point. The first case was at Mr. Woolsey's, which is an adjoining farm. The next five or six cases were on the farm of Mr. Waite, but it leaped over a farm to get to Mr. Waite's,—supposing that the animals were affected by Mr. Harvey's cattle. He lost, I think, seven or eight. I have lost one; but I purposely kept free from stock. But yesterday before our association we had a very large dealer, who has a farm immediately adjoining mine, and a most serious outbreak has taken place there, inasmuch as 25 lean beasts were killed last evening by order of the inspector, and several others are in a very unsatisfactory state.

1225. The disease has spread from Crown Point in all directions?—Certainly.

1226. Your opinion is that it is spread by atmospheric causes as well as by contact?—There has been no direct contact. There could not by any possibility be any contact with Mr. Birbeck's stock, and there could not be with Mr. Colman's, because it is on the other side of the river; and with regard to Mr. Woolsey's and Mr. Waite's animals, I believe that there could be no contact. Mr. Harvey's stock were all buried on the spot, and not removed.

1227. Do you believe that flies could carry the contagion?—I cannot say; we had legions of them in the very hot weather. The flies themselves did not suffer.

1228. Do you think that it would be advantageous to stop store markets for a time?—I am quite of opinion that it would be desirable to stop the great assemblage of stock which necessarily occurs in all fairs and markets.

1229. What is your opinion as to the origin of the disease?—That is rather a vexed question. I am quite certain that it is highly contagious, and highly infectious; but I am not prepared to say that there may not be some other influence at work.

1230. (*Dr. Playfair.*) You mean to say that there may be some atmospheric conditions?—There may.

1231. (*Professor Spooner.*) That is to say in this country?—I am not so strongly impressed with that opinion as I was at an early period of the outbreak in Norfolk.

1232. (*Mr. Lowe.*) Of what opinion?—As to its being atmospheric. I am certain that it is spread most quickly, both by contact and by infection.

1233. (*Mr. Read.*) Do you believe in its spontaneous origin?—I believe the thing to be almost impossible; but nature will not let you into her secrets, and I cannot answer the question.

1234. (*Dr. Playfair.*) What do you exactly mean by infection, as distinguished from contagion?—I mean by one animal breathing the air which has been breathed by a diseased animal.

1235. (*Mr. Read.*) You are quite of Mr. Smith's opinion, that the prohibition of the Norfolk Cattle Plague Association from purchasing stock in the market for six weeks was judicious, and the result satisfactory?—I think decidedly so.

1236. You also think that associations which grant compensation to owners of stock are productive of great good?—Yes.

1237. Not only to the owners of cattle themselves but also as to the spread of the disease?—I think that the instructions issued by the association have acted so far as a remedy. There is very great difficulty with regard to isolating stock, particularly upon the premises in Norfolk. Mr. Stroyan, who is a very large dealer, when there was a very serious outbreak, of which we were informed yesterday, strongly urged the association to prohibit fairs, in which he was joined by another very large dealer, Mr. Coleman.

1238. (*Mr. Lowe.*) You said that you differed from Mr. Smith in some respects. What are your differences?—I am not quite certain whether the disease is of foreign inportation; I have every reason to believe from what I have heard that it is.

1239. Is there any other point in which you differ from Mr. Smith which you would like to state?—Without pronouncing that the two diseases are identical, my opinion is, I think, rather stronger than Mr. Smith's, that the disease is Cattle Plague in sheep, likewise, that the same disease is attacking sheep which has been attacking cattle; and I ground that opinion on the fact of the disease in the sheep following so immediately on the Crown Point Estate, where the attack was so virulent with regard to cattle.

1240. How came the sheep to be put on the pasture where cattle had been fed just before?—There was a very large quantity of pasture newly laid down, and there was an abundance of feed in the month of July, and Mr. Harvey's intention was to have sold everything out, but unfortunately he could not do it.

1241. Does Mr. Harvey disbelieve in contagion?—I think that he is not a believer in contagion. I believe that he quite pooh-poohed the idea of Cattle Plague being a serious matter at all. Mr. Harvey has published on the subject, and therefore his letters are to be read.

1242. He argued against the disease being contagious?—I think that he did, and it is rather singular that he should have had such a serious outbreak.

1243. (*Dr. Playfair.*) Has there been an equal mortality with meadow fed cattle and with stall kept cattle?—The greater number of cattle which have been kept in Norfolk have been grass fed cattle.

1244. In meadows?—Yes; it is not usual to keep cows entirely with stall food, particularly in Norfolk.

1245. Has there been more disease amongst cows than amongst oxen?—I think not in Norfolk.

1246. (*Professor Spooner.*) Are you thoroughly satisfied of this disease being different from any other disease which you may have seen as affecting cattle; have you had an extensive practice?—I have been in practice for about 30 years, and have never seen anything like it before.

1247. Either in the bovine or in the ovine animals?—Neither.

1248. You look upon it as an entirely new disease in your experience?—I do.

1249. Does that in any way govern you in your conclusion with regard to the causes tending to its production?—Yes, to a certain extent it does. I am less inclined to think that it arises from atmospheric causes. I think that it is conveyed from one animal to another in some mysterious way, and perhaps from causes which we do not yet know.

1250. Have you in your experience seen disease affecting oxen and sheep which has assumed what is designated as a typhoid or a typhus disease, similar to diseases which are so termed in the human subject?—I have seen cases similar, I think, to typhoid fever, but certainly not to anything like the extent which is seen in this Cattle Plague. In fact I have never yet myself witnessed a single case of cure of true Cattle Plague. I do not mean to say that cases have not recovered; nature very often makes a very vigorous effort, and cattle may recover; but with regard to the Crown Point bullocks, every animal has died.

1251. (*Viscount Cranborne.*) You have spoken of certain mysterious sources as the means of propagating

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the disease. I suppose that the majority of cases of cattle disease have been propagated, not in those mysterious ways, but by actual contact?—The greater number decidedly.

1252. (*Chairman.*) Will you state the date of the outbreak at Crown Point?—I think that it would be between the 20th and the 28th of August; but I did not see the cases in the first instance. Mr. Harvey did not call any one in. I only heard of them afterwards.

1253. You say that you differ in some degree from the opinions of Mr. Smith as to the character of the disorder; what is your opinion of the origin of it in Norfolk?—I have no means of judging of the origin. Mr. Smith is the inspector on Norwich Hill. I have heard what he has said with regard to the disease being introduced from the Metropolitan Market. I have no knowledge at all myself upon the subject. My impression was, that when the outbreak took place at Crown Point it had not arisen from any cattle with which those cattle might have come in contact; but afterwards I saw reason to alter that opinion.

1254. (*Mr. Read.*) Your opinion differs from that of Mr. Smith, but it in no case amounts to a contradiction?—Certainly not.

1255. It is only a difference in degree?—Certainly.

The witness withdrew.

Mr. W. Sharp.

Mr. William Sharp examined.

1256. (*Chairman.*) You are bailiff to Lord Sydney?—Yes, I am.

1257. Lord Sydney's estate is at Frognal in Kent?—Yes.

1258. State the extent of arable and grazing land on the farm you superintend?—There are about 80 acres of arable land, and 300 odd of grazing ground.

1259. Has he many cattle on the farm?—He had 13 dairy cows and 11 store animals before this disease came on, and 300 sheep.

1260. Where were the dairy cows and those 11 store animals pastured?—In the park, at different ends of the park.

1261. Is the park enclosed in any way?—It is divided into several parts by fences, and one part by a short wall.

1262. Is there any wall round the whole of the park?—No.

1263. It is enclosed like an ordinary farm?—Yes.

1264. Will you state to the Commission what occurred to those cattle?—One was seized at first with the disease, and was sent away before it was certain that it was the complaint it was taken with; in eight days afterwards four of the others were seized.

1265. Will you give the date of the first seizure?—I think it was on the 21st of August.

1266. Was it a cow that was seized?—A steer.

1267. What became of that steer?—The steer was sent in a hospital cart to an infirmary; but being worse on arriving there was sent to the knacker's.

1268. Where?—It was sent to Greenwich.

1269. Was it not sent by your orders?—It was.

1270. Do not you know where you sent it?—I did not see the exact spot that it was sent to.

1271. What orders did you give to the man who had charge of it?—I ordered him to make away with it, if it showed any further symptoms the next morning of the complaint.

1272. What did the man do with it?—He took it away and sent to the knacker's the next morning.

1273. That was on the 21st of August?—Yes.

1274. What happened afterwards with the herd?—Eight days afterwards five more were seized.

1275.—What were they; steers or cows?—Steers, and they all died.

1276. When did they die?—Two days afterwards.

1277. The 31st of August?—On the 1st of September.

1278. They were seized on the 30th of August?—Yes.

1279. Did you have a veterinary surgeon to examine them?—I had, and an inspector also saw the five.

1280. What disease did he pronounce it to be?—The Rinderpest.

1281. Did any of the other animals on the farm take the disorder?—Three more died of it.

1282. What were they?—Steers.

1283. No cows died of it?—No; the heifers recovered; two heifers that were there recovered from the complaint.

1284. Were the heifers feeding with the steers?—Yes.

1285. (*Mr. Read.*) In the same field?—In the same field.

1286. (*Chairman.*) What is your opinion as to the origin of the disease among those steers?—I am unable to account for it at all.

1287. How long had those steers been on the ground?—Six weeks at least in that same place, but they had never been off of the estate.

1288. Were they bred by Lord Sydney?—Yes.

1289. Had you made any purchases of cattle a short time before?—I had not, not for 12 months, and then it was only sheep.

1290. You had not purchased any horned cattle?—No.

1291. When were the sheep purchased?—I think last September.

1292. Can you give the date of the purchase?—No; it was over a year ago.

1293. In 1864?—Yes, and I did not purchase any more stock.

1294. No horned cattle or sheep have been purchased on the estate for more than one year?—No; there have not been any purchased for more than a year.

1295. Lord Sydney does not take in any joist stock?—No.

1296. You never do that?—I have not known it since I have been with my lord.

1297. You never take in any cattle or sheep in that way?—No.

1298. Was there any disorder among the neighbouring herds or flocks?—Three miles off, at Eltham, there was some.

1299. What happened there?—Mr. Green lost a great many.

1300. What was the disease by which he lost the cattle?—It was supposed to be the Rinderpest, but I did not see them.

1301. Had there been any communication between Mr. Green's farm and yours?—No.

1302. Is there any river running through your farm?—There is not.

1303. There is no communication by drainage from Mr. Green's farm to Lord Sydney's?—Certainly not, I think.

1304. Is there any road leading through Lord Sydney's park?—Only private roads.

1305. The outside of the farm does not communicate with any turnpike or public road along which the cattle might have been driven from one farm to another, or one market to another?—There is a wood between it and the road, and some houses, and a short space of wall.

1306. What is the width of the wood?—250 yards.

1307. And along the private road no cattle passed during that time that you are aware of?—Not that I am aware of.

1308. (*Mr. Read.*) Your sheep have not taken the disease?—They have not at present.

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1309. Were they pastured with the stock that died ?—Some of them were.

1310. And they are perfectly healthy now ?—They were healthy this morning.

1311. How many cattle escaped ; you say that two heifers took the disease and recovered ?—That was all that were in the same herd, the nine that died and the two that escaped.

1312. How near were the dairy cows to them ?—About a quarter of a mile from them.

1313. They are now alive and well ?—Yes.

1314. You stated that the nearest case of Rinderpest that you heard of was within three miles. Do you mean three miles by road, or three miles as the crow flies ?—Three miles as the crow flies.

1315. You had not heard of any cattle that were affected with the plague passing by you ?—I had not heard of any; but there are several roads; there might be some.

1316. (*Viscount Cranborne.*) Was it during the very hot weather that what you have described occurred ?—It was hot weather at the time.

1317. Was there a very great number of flies about ?—Yes, a great number, especially round the animals when diseased.

1318. (*Dr. Quain.*) Were there any cattle besides Mr. Green's cattle affected in that neighbourhood ?—I was not aware of any more at the time.

1319. Have any others been affected since ?—Some since.

1320. In what relation to yours or to Mr. Green's were those ; how near to them ?—They were about two miles off.

1321. In the same direction as Mr. Green's, or on the other side ?—A little to the left hand.

1322. The disease had not crossed your park ?—No.

1323. Was there any footpath or private road leading through your park in any way ?—No.

1324. Not the least ?—It was not a direct footpath; there is not a footpath in the same field that the animals were feeding in; there is one about 300 yards off.

1325. Is there any probability that the butchers who had been to see Mr. Green's flock for the purpose of slaughtering them could have gone to look at your cattle ?—I should say not ; they had no business there, and I have not seen anyone there.

1326. Was there any communication by means of dogs, or were your dogs fed on any offal at Mr. Green's farm ?—No ; we had no connection with his farm at all, not the most distant.

1327. Did you go to look at these animals yourself ?—No.

1328. Did any of your people go to see them ?—None of them went to see them.

1329. (*Professor Spooner:*) How long antecedently to the disease showing itself in Lord Sydney's cattle did the disease exist in Mr. Green's cattle ?—I do not know.

1330. Had you heard of the disease existing in Mr. Green's cattle before it broke out among Lord Sydney's ?—I had a day or so before. I only heard it then.

1331. Calling your attention to the first of the cattle that you say was attacked, and which you sent to the knacker's, I think you stated that the symptoms were not so fully developed in that case as in the subsequent cases they showed themselves ?—They were not.

1332. What induced you to send that animal away to the knacker's ?—I was afraid of the disease, and I did not understand the complaint that the animal was labouring under.

1333. Do you mean to say that if all the oxen had shown the same symptoms you would have sent them all to the knacker's ?—No, not after I knew what the complaint was, I should not. I did not remove another after that.

1334. Did you hear what became of it ?—I heard that it was sent to the knacker's and destroyed.

1335. Are you acquainted with any of the parties who are acting under Mr. Green ?—I am not.

1336. You do not think that any communication could have taken place between any of his servants and the servants of Lord Sydney who might have looked after your cattle ?—I think not.

1337. When you say that Mr. Green's place is three miles off, do you mean the Commissioners to understand that where Mr. Green's cattle which were attacked were situated was three miles distant from where Lord Sydney's cattle were located ?—I should say so.

1338. (*Dr. Quain.*) What water did they have to drink ; was it pump water ?—It came out of ponds.

1339. (*Viscount Cranborne.*) Where does their food come from ; off the estate; or do you buy it; or were they merely grazing ?—Only grazing.

1340. (*Chairman.*) Are cattle that feed on the land where these were grazing usually healthy ?—Yes, they are.

1341. You had not any disorder among the cattle on this pasture before ?—Eighteen months ago they had the foot and mouth disease.

1342. Was that brought about by other animals being mixed with them, or did they get it spontaneously there ?—I am not aware ; it took place before I was with Lord Sydney.

1343. (*Dr. Quain.*) Do you recollect in what quarter and how the wind was with relation to the animals that were sick ?—No, I do not.

1344. You kept no register of it at the park ?—No, I do not think we did.

1345. (*Dr. Playfair.*) Were there any strong winds at that time ?—I think not.

1346. (*Chairman.*) Is there any farm intervening between Lord Sydney's and Mr. Green's ?—Several.

1347. Were the animals on those farms attacked by the disease as well as yours ?—I think not until after our animals were all dead.

1348. In the opposite direction to Mr. Green's farm were there any other herds of cattle attacked with the disorder ?—I believe three animals had it.

1349. How far off were they ?—Nearly four miles.

1350. Were the animals that were pastured between those and your farm attacked by the disorder ?—I believe not.

1351. Were you made aware of any cattle travelling along the road, say ten days previous to the outbreak of the disorder ?—I had not heard of any.

1352. Was there any fair at the neighbouring town ?—I think not.

1353. You are not aware of any of the neighbouring tenants having recently purchased cattle in the Metropolitan Market ?—I am not, without it was about three miles off. A butcher bought three, and they died.

1354. (*Mr. Read.*) Did those three pass anywhere near your farm ?—I do not know. I cannot say which way they came.

1355. (*Professor Spooner.*) How many animals in the whole has Lord Sydney lost ?—He has lost nine in the whole.

1356. Upon the average how long did those animals live after the symptoms became apparent ?—Four or five days ; five lived only three days, and two lived 15 days.

1357. Were those which lived 15 days the first that were affected, or were they the last that were attacked ?—That was after the first one was attacked.

1358. They were the first cases that declared themselves after the first one that you sent away ?—Yes, seven days after the first one was sent away.

1359. And those two animals suffered for 15 days before they died ?—Yes, they were the last that died.

1360. In the intervening time other animals were taken ill and died in three days ?—Yes.

1361. (*Chairman.*) You have stated that on the 21st of August one steer was seized with the disease,

and that no other animals were seized until the 29th of August ?—Yes.

1362. Was the steer that was first attacked a strong and healthy animal ?—He was hardly so healthy as the other animals; he had not at any time appeared so healthy as the others, and did not feed so well; in fact he was the most weakly one of the lot.

1363. What was the age of that animal ?—Three years old.

1364. Had he been subject to any disorder before ?—Only the foot and mouth disease.

1365. How long previously had he had that ?—15 or 16 months before.

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1366. (*Mr. Read.*) Are you sure that that one bullock died of the Cattle Plague ?—It was destroyed it had not the symptoms very plain at first when I saw it.

1367. Who did see it after it left Lord Sydney's farm ?—A surgeon saw it; Mr. Green, a veterinary surgeon of Greenwich.

1368. Not an inspector ?—No; an inspector was not appointed at the time, that I know of.

1369. Did any veterinary surgeon see the animal ?—Yes; Mr. Green of Greenwich.

[With reference to the evidence given by the next witness, Mr. Sharp desires the subjoined note to be added to his evidence :—

" Mr. George Crowhurst, of Chislehurst, butcher, who occupies land near Viscount Sydney's Park, has not had any disease amongst his animals, and is not in the habit of turning into that field any animals purchased for the purposes of killing for meat. The animals in that field are milch cows, and are perfectly healthy. I do not think that the disease could have been communicated in that way.

" With regard to the animals belonging to Mr. Slade and others in the vicinity, I did not hear of any case of Rinderpest amongst their stock until three weeks after the last animal in Lord Sydney's Park was buried.

" I have made further inquiries as to the origin of the disease in Lord Sydney's Park, but can find no more evidence than stated before the Commission.

WILLIAM SHARP."]

Mr. JAMES COWIE examined.

Mr. J. Cowie.

1370. (*Chairman.*) I believe you are inspector of some district in the county of Kent ?—Yes.

1371. Will you state what that district is ?—It comprises the Bromley Union.

1372. By whom were you appointed ?—I was first appointed by the Privy Council for the London district, and I had for a short time the district of Lewisham, Forest Hill, Sydenham, Bromley, Beckenham, and the Crays, but after my appointment by the justices I gave up a considerable portion of the London district.

1373. You were in fact appointed by the justices of a petty sessional division to inspect this district ?—Yes, along with another.

1374. Will you state what you know about the outbreak of Rinderpest in Lord Sydney's park ?—I received a telegraphic message from Professor Simonds late on the 31st of August, I think, stating that he had had a communication from Lord Sydney that the disease had broken out in his herd, and suggesting that I should go there immediately. I could not go that day as it was too late, and I could see nothing in the dark; however I went the next morning, and I found that two or three animals had had the disease and were buried; one had been carried off by the veterinary surgeon to attempt to cure it, as I understood, but it was too ill, and afterwards, when he got it to Greenwich, it was destroyed, as I understood. There were several others in the disease when I went there, they were confined within a courtyard and one after another they died; two of them stood out for a considerable time, those two which Mr. Sharp has referred to as having lasted for so many days; they did not show any distinct disease until within five days of their death, one of them especially went moping about and appeared to be rather dull, but it did not show any distinct marks of disease until within five days of its death. I suspected it was taking the disease.

1375. Can you give the Commission any idea as to the origin of the disease among those cattle ?—I am sorry that I have had rather a short time to prepare, but if I had known that I should have been wanted I would have made inquiries, because I think there are some suspicious circumstances connected with the matter that ought to be looked into. Mr. Crowhurst, a butcher at St. Mary's Cray, has a brother who is a butcher in Chiselhurst; he bought an ox in Romford market, I understood, and he took it home to kill; it had the disease, and it communicated the disease to five or six others, all of which died. He sold a calf, I understood, or a calf was bought from his immediate neighbourhood or premises by a farmer, and that calf gave the disease to his stock, and he lost four or five cows. He has a brother who is a butcher in Chiselhurst who has a grass park right across Lord Sydney's, and in fact the road only separates them, and it would have been worth while to have ascertained whether there had been any communication with the brothers, or with their cattle.

1376. Have you not inquired into that matter ?—No; I did not expect to have the honour of being called as a witness here, otherwise I should have done so; if it is requisite I can do so still, but I will here remark that to my certain knowledge in my district two butchers have brought the disease to the district by purchasing cattle at fairs, or at Smithfield, and the disease has been communicated to several others.

1377. That is the only source to which you can trace the disease which broke out among Lord Sydney's cattle ?—Yes, that is the only source to which in the meantime I can trace it.

1378. (*To Mr. Sharp.*) Is it the case that Mr. Crowhurst has a field opposite to Lord Sydney's farm ?—It is not opposite the place where these animals were.

1379. Is it opposite to any part of Lord Sydney's farm ?—It is opposite to the end of a part of the park, and it is separated from that by a road and a thick holly hedge.

1380. What is the width of the separation between the two fields ?—It is almost 50 yards from the inside of one hedge to the inside of the other.

1381. In the field belonging to Lord Sydney that is adjacent to this field of Mr. Crowhurst's had you any stock feeding at the time ?—We had some sheep.

1382. Could this stock communicate with other parts of your farm ?—Our sheep could communicate with our own stock, but not with those of Crowhurst.

1383. Are you aware whether Mr. Crowhurst had any animals suffering from Rinderpest on his farm ?—He has not had a single case on his place.

1384. Is he in the habit of changing his stock frequently ?—He is a butcher, and he generally buys in the London market, but he seldom puts the animals on that farm.

1385. But he does sometimes ?—Yes.

1386. Does he put the animals that he is going to slaughter for a night or a day or two in this field ?—I have not seen any there; he generally puts them in a little meadow close to his house, or in a slaughter-house.

Mr. Cowie.—I wish to say that a butcher has facilities of hiding from the public and from inspectors or the police, and all and sundry, the disease, which others have not; they can of course kill them, and inspectors do not go when they do

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not know that there is disease, nor will they have the information, and they do not go to inspect them. A butcher, seeing an animal in an incipient state of disease, can quietly take it to his slaughter-house and kill it, and that was the case with the butcher in Bromley; no one knew it, and I daresay he did not know it himself, but he had brought unawares a diseased beast to his premises; his cows took the disease first, and they communicated it to others; he took a park in the neighbourhood of Colonel Long's, and Colonel Long a very short time ago had one animal attacked, and then another, and I have no doubt the disease will go on.

1387. You have a considerable district in Kent under your charge now?—Yes.

1388. Has there been much of Rinderpest in that district?—In the western portion of it there has been a great deal, but not in the eastern.

1389. When did it break out in the western portion of your district?—It broke out about the middle of August. I believe that Mr. Crowhurst's case was about the first.

1390. To what do you attribute the origin of the outbreak in your neighbourhood?—We can trace it in every case to infection satisfactorily, except in Lord Sydney's case.

1391. From what quarter did the infection come?—The infection came from London.

1392. Has it been invariably so?—Almost; there is a large dairyman in Lewisham whose stock I attended first, and the disease was communicated to his cattle by a number of Dutch cattle that he bought in Copenhagen Market, and by that means he infected the whole of that district; there were hundreds which died or were sent away in consequence of that alone.

1393. Had those Dutch cattle been standing in the market for any time?—No, I think not. They were brought down and put in Beckenham Park 22 of them, and they were only three days there before the disease broke out; 16 of them died, five have recovered, and one has died since from pleuro-pneumonia.

1394. Can you see any reason why the eastern part of your district should be unaffected with the disease, while the western part is affected?—The only reason I can give is, that they have more communication in the western district with the London market. The eastern is better supplied with country markets.

1395. Were any special regulations made for the purpose of preventing the spread of the disease in the eastern district?—I do not think so; there was no inspector appointed before I was.

1396. Have you reason to believe that the present system of inspection works satisfactorily and tends to prevent the spread of the disorder?—I do not think it will ever be stopped until there is some arrangement made with regard to the butchers; they drive the cattle from the London market along the road and these infect the districts as they go along.

1397. You believe it is possible for healthy animals to be affected by diseased cattle when passing along a turnpike road?—I do decidedly think so.

1398. Would you extend that observation to a railroad?—Yes, I would; the instincts of the animals and their olfactory nerves are much more powerfully sensitive than those of a human being, and I think they are more subject to infection than a human subject.

1399. Have you known any instances in which cattle grazing in a field near to a railway have caught the disease from cattle passing along in trucks?—No; but I know of an instance that occurred the other day with General Dacre's cows. I called upon him. I was inspecting Mr. Slade's cows at the time, and I pointed out a bull that was bad with the disease. The wind was blowing right towards his cows, and I said to him, "You may depend that you will have "the disease among the cows, but whether or not "you should remove them out of reach of the infection, or of the wind;" but he said, "Why, it is "about 300 yards off; there is no chance of it;" but in three days one of his cows took the disease, and they all, five or six, died in the course of a short time.

1400. Without having had any contact whatever?—Yes; there was a public road between them for one thing, and a large field, and the bull was in the middle of the field, and he could not remove from that place.

1401. Did you investigate that case in order to ascertain that there had been no communication whatever between the diseased bull and the cows?—There were on the other side Mr. Green's cattle, about two or three fields off, much further than in the case of Mr. Slade, but I attributed it to infection from Mr. Slade's stock, and I do not believe that they were within 300 yards of the general's cattle.

1402. There were no persons passing from one herd to another, or any dogs?—Not that I am aware of. I know that they were very particular at General Dacre's place not to allow any person to cross their field at the time for fear of the disease.

1403. Did the cows drink water that came from the other place?—No; the pond was 300 yards distant from the general's.

1404. There were no other means by which these animals could have been infected except by the atmosphere?—No other means whatever; I should never consider that cattle were safe within many hundred yards of diseased cattle.

1405. (*Viscount Cranborne.*) How many hundred yards?—I could give no limit, but we can ourselves detect a bad smell half a mile off. The offal of fish or the entrails of cattle, if allowed to lie exposed on a hot day, can be distinguished a great distance off. There is an exudation from the excrement and from the nose and the eyes which has a most peculiarly offensive smell, and which I believe contains the essence of the disease.

1406. Is that characteristic of the Rinderpest?—Yes; some half dozen or a dozen cattle affected in that way would spread the disease abroad.

1407. (*Dr. Quain.*) Do you mean the smell comes from the fæces or from the nose?—Yes, from the fæces, and from the nose and the eyes and the skin.

1408. (*Chairman.*) You entertain an opinion as to the manner in which the disease is communicated which is rather different from other opinions, you do not think that it is communicated entirely by contact?—No.

1409. What remedy have you to suggest in order to put a stop to the disease?—I think that the fairs must all be stopped for a month at least, that is as short a quarantine as I should recommend, and further that all cattle should be killed that are sold to butchers without being taken away from the city, in fact that they should not be allowed to go away.

1410. Do you think that that could be practically carried out in the country?—Quite well; they have all the conveniences provided, they could get to the slaughter-houses and have the animals killed in the town; it would only be for a short time.

1411. At the present time, I believe, in the city there is a regulation that no animal should be sent to the Metropolitan Market except for slaughter; is that strictly carried out?—It is carried out, but not to this extent that a butcher at Bromley cannot purchase a beast and drive it off along the public road.

1412. You do not think that any plan would work efficiently unless the animals were actually killed on the spot?—No, I do not.

1413. (*Viscount Cranborne.*) You were speaking of butchers buying cattle in the Metropolitan Market and taking them down to your neighbourhood for slaughter, how long do they keep them before they slaughter them?—For several days frequently; in hot weather, for instance, they do not kill them until just the day before they require them.

1414. Do they keep them in the neighbourhood of other cattle?—They frequently have paddocks in

their immediate vicinity, not perhaps close to their slaughter-houses, but within half a mile, and they put them into those paddocks or they put them into their own sheds.

1415. And these are cattle to which the inspectors cannot get, and of whose condition they have no knowledge ?—Yes ; they may have the disease as it is called in the first or second stages without any inspector knowing anything at all about it, and the butchers have facilities for concealing the state of matters that no other person has, and therefore I think that more than ordinary stringent regulations should be made with regard to them.

1416. (*Mr. Read.*) What is your opinion as to the origin of the disease ?—I have simply the information that other people have, that it has come from abroad. It is undoubtedly a specific disease with which we have hitherto been totally unacquainted, and we are led to believe that it is of foreign extraction.

1417. Did you ever see the like before ?—Never ; in pleuro-pneumonia sometimes it exhibits the same appearance, and in one or two cases among Lord Sydney's cattle there was hardly any exudation from the nose or the eyes, but still there were other symptoms which would indicate the Rinderpest. I now speak about their appearance during life, but we had a post-mortem examination made of one of Lord Sydney's cattle.

1418. You have read of the symptoms of the Rinderpest in foreign countries, and you suppose the disease now in this country to be the same ?—Yes.

1419. And that the varying symptoms are such as you would expect from the difference of climate ?—Quite so, and from the constitution of the animals ; the constitution of the animals must be, to a certain extent, different here.

1420. You would prohibit the holding of all fairs and markets in the country for at least a month ?—Certainly.

1421. Would you allow markets to be held for the sale of fat stock for slaughter in the provinces ?—No, I would not. In Scotland, in infected districts particularly, they have prohibited all markets being held, or fairs of any kind, for from a month to two months, and this with the entire concurrence of farmers and others ; and they have no difficulty in getting cattle, they can go to their next neighbour who wants to sell and buy cattle, knowing that they are healthy ; they supply themselves in that way, and very little inconvenience indeed is felt from stopping the markets for a time, for the purpose of attaining such a great end.

1422. (*Viscount Cranborne.*) Has not this prohibition had the effect of raising the price of meat in all the towns in Scotland ?—As far as it has gone it has lowered the price. In the Edinburgh Market yesterday the price was only 9*s.* and 9*s.* 6*d.* for 14 lbs., and the sheep were sold at 4*s.* 6*d.*; it has not raised the price in the meantime, but it has rather lowered it.

1423. (*Dr. Playfair.*) What is the reason of that ?—It is because they are selling as much as possible for fear of the disease, for one thing ; when the disease breaks out they kill the healthy animals to save them from being diseased, or lost.

1424. (*Mr. Read.*) You have quoted the price of meat in the Edinburgh Market, it would appear therefore that the Edinburgh Market is not closed ?—It is closed except for those animals which are to be slaughtered immediately.

1425. It is closed with respect to store stock ?—Yes ; but the country fairs are stopped entirely.

1426. (*Dr. Quain.*) Have you any knowledge of any of the diseased flesh being consumed by the people ?—No.

1427. Do you believe that butchers send much diseased meat to market ?—It was my own butcher who had the diseased beast that gave it to his own cows, and I perhaps ate part of it myself, but I do not know.

1428. Do you know whether there are any means by which the flesh could be recognized as that of a diseased animal ?—Not unless the disease has gone to a considerable extent.

1429. What appearance does the meat then exhibit ?—It turns green after being killed for some time ; it might be killed and disposed of immediately afterwards, or within an hour or two afterwards, or two or three hours, without being discovered.

1430. It does turn green more rapidly than the flesh of healthy animals ?—Yes ; it turns also to gangrene ; that is, when it is in the second stage. I should say not in the first stage.

1431. (*Professor Spooner.*) Referring to the slaughtering of animals, suppose that an animal unmistakeably affected with the disease was slaughtered, and its carcase was conveyed from the place to a distant part, do you think that the flesh so conveyed would be likely to impart the disease to any other animals ?—Not if the skin was off.

1432. Then you do not think that the same danger would arise from the transmission of a dead carcase as from the living animal ?—No, I do not think so.

1433. Have you any reason to give for that opinion ?—I am supposing that the head and skin are both gone ; if you had them, and the exudation from the nose and the eyes was there, a smell might proceed from it ; but if you have decapitated the animal and skinned it I do not think it is likely.

1434. (*Dr. Playfair.*) And the intestines taken out ?—No ; I am supposing that they are not exposed.

1435. (*Professor Spooner.*) You do not think there would be any danger of communicating the disease by the flesh of the dead animal ?—No.

1436. (*Dr. Playfair.*) Do you mean with the intestines of the animal still in it ?—Yes ; if the intestines are still contained in the abdomen without its being opened up, that is to say immediately on the removal ; but I think after a time that the intestines might communicate the infection to the surface of the body, and so communicate the disease ; it is a mere matter of opinion.

1437. (*Professor Spooner.*) I was speaking merely of the flesh of an animal being conveyed from place to place for human food ; an animal under those circumstances would be deprived of its intestines ?—I do not think, unless where the disease actually exists, such as in the intestines and the stomach and the head, it would be communicated simply by the flesh of the animal.

1438. (*Dr. Playfair.*) Would you permit the carcase of an animal with its head off to be transported from one place to another with the intestines still in, which you know form the seat of the disease ?—No, I would not allow that ; I am supposing that the animal is immediately killed and decapitated and skinned, and carried off, for instance, to be buried. The flesh simply, entirely apart from any of the affected organs, I do not think would communicate the disease.

1439. (*Mr. Lowe.*) You say that in Edinburgh no beasts are now brought to the market, except for immediate slaughter ?—Yes.

1440. What security is there that they are immediately slaughtered ?—The purchasers are subject to a heavy penalty if they are not slaughtered. The inspector will have his eyes about him, and also the police, to see that they are not removed beyond the city.

1441. They are taken to a slaughter-house and killed ?—Yes.

1442. Are the butchers allowed to keep them at the slaughter-house for any time ?—I believe not ; they are not allowed to keep them beyond a certain time.

1443. Does that appear to you to be a sufficiently stringent provision ?—No. There is of course danger attached to their being conveyed from their place of abode to the market.

1444. No precaution is taken against diseased

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beasts being sent to the market?—None, unless by the railway officials.

1445. Who have no interest in the matter?—They simply instruct their servants to watch, and to see that no diseased cattle are put into the trucks.

1446. Even the market in Edinburgh, in your opinion, had better be discontinued for some time?—Yes.

1447. You would prohibit all markets all over the country?—Yes.

1448. And let the butchers go to the parties who have cattle to sell, and have them slaughtered there and carried away?—Yes; unless some extraordinary measures are adopted I am satisfied that we shall not get clear of the disease.

1449. Do you think that if the markets were closed for a month they would get rid of the disease?—Yes, unless it was imported again from abroad.

1450. Would you suggest any further precautions with regard to cattle being imported from abroad?—Not unless there was a longer quarantine enforced.

1451. There is great practical difficulty in having quarantine at all, is there not?—Yes, there is; but there are no other means that I can see, unless the animals are killed at the port where they are landed.

1452. Would that, in your opinion, be an advisable step?—At all events I think it would be where the animals are suitable for being killed; but so many of them come to us for the purpose of being fattened, that it would almost amount to a prohibition to kill them.

1453. How so?—Because there are so many lean cattle that come, and it would be a great sacrifice with regard to the parties sending them if they were to be slaughtered on the spot.

1454. You think that it would prevent their sending lean cattle?—Yes, I do.

1455. Still, taking into consideration the difficulty that we are in, such a step would be advisable, would it not?—I do not go that length, for it must be observed that we must carry it out for a longer period than a month; in fact we should be continually exposed to infection from abroad, and there must be some permanent stringent measure adopted with regard to importations from abroad which is not requisite for our home consumption.

1456. I do not quite gather from you what you think that measure should be?—With regard to importations from abroad the only means are to make them serve a long quarantine. I do not think that a fortnight would be sufficient. There was one case which occurred among Mr. Slade's cattle; he removed two or three animals from his infected cattle and put them in another field, and they were quite healthy for three weeks and a day or two, and then one of them took the disease and they all three died.

1457. They had been in a state of incubation for three weeks?—Yes.

1458. How could you practically work out a system of quarantine without introducing the disease into the country?—You cannot do it, but you could act very stringently for a time—at all events, until we were quite certain that we were not dealing with countries where the disease existed.

1459. Supposing, for example, that a shipload of cattle arrived to-day and another to-morrow and another the next day, you would have to put them all together?—No; but the fact is that there are such enormous supplies got from abroad that there is great difficulty in it.

1460. If any one of those animals was infected at the place of quarantine it would not do to use that place again for quarantine. You would not put fresh beasts there?—Not until it was cleaned out.

1461. The difficulties would be endless, would they not?—Yes, as to foreign cattle. The great point is to prevent cattle at the other end being exported; and without inspectors abroad, and there being interested parties abroad, we cannot prevent it.

1462. Do you think that inspection, taking it altogether, is a thing that we can rely upon in order to prevent the importation of diseased cattle?—No, I do not. I think that if the disease exists abroad we shall be always more or less liable to infection.

1463. Is not the nature of inspection this, that when we are in a panic and alarm it is very vigilant and good, and then in quiet times it naturally relaxes?—Yes; it is so very often.

1464. With regard to the inland markets, is the only measure that you would recommend this, that the markets should not be held?—That is one measure.

1465. Does not it often happen that when a market is forbidden the farmers meet on some other field a few miles off and hold a sort of market of their own?—No, they do not do that; they are so frightened in Scotland where the disease prevails that they would not venture to buy a beast in a market.

1466. But did they not do so at Croydon a short time ago?—Yes, but that was because they did not get sufficient notice; the notice only went out a day or two before, and they had not time to stop their cattle, and they complained much of it.

1467. Do you think that would not be done again?—Yes.

1468. It happened also at Keston, but you do not think that the prohibition would be evaded?—No.

1469. Not perhaps while they were in a state of panic, but afterwards would it not be evaded?—I would call every accumulation of cattle a market under those circumstances.

1470. Then you would go further, and prohibit any accumulation of cattle for sale?—Yes.

1471. Do you think that markets and accumulations of cattle for sale are the only ways in which this disease can be circulated?—There is no doubt that it has been so in Scotland in the first instance, and that the disease has infected all Forfarshire. There were several parties who bought cattle in Falkirk, and they brought them to Forfarshire, where infection extensively spread. A meeting of the justices and the lord lieutenant was held, and they prohibited all markets in the county. They could trace the disease step by step from Falkirk Market all the way from Dundee to Montrose.

1472. Do you think the markets are the only means by which the disease is communicated?—No; but they are a great cause.

1473. Do you not think that taking cattle into joist or into lairs may be one cause?—Quite so.

1474. Would you prohibit that?—I do not precisely understand the question.

1475. Suppose I have a farm, I take other cattle on to my farm to feed, and I am paid for that; the cattle remain there for two or three months; might they not bring the disease?—Yes.

1476. Would you prohibit that practice?—You could not well do that.

1477. Would you prohibit the lean cattle that come down from the Highlands from coming into England?—I would prohibit for a month all communication by cattle from one place to another.

1478. Not merely with respect to the markets, but you would prohibit all communication for a month?—Yes.

1479. Do you think that would be sufficient?—I think so, or perhaps for a longer period; but it might so seriously interfere with the business of the country that it might be objected to.

1480. It would be very serious, no doubt; but what is your view, on the other hand, of the danger that we should run?—If the inspectors do not do their duty properly, or if the Privy Council did not see that they do their duty, I think that the disease will spread much more extensively than it has hitherto done. At Chiselhurst there were several new cases last week, which is close to Lord Sydney's.

1481. (*Dr. Playfair.*) Do you think that the mere stoppage of the movement of cattle for a month would be effectual, unless great care was taken that all the manure of the diseased cattle was disinfected and all

the sheds well cleansed?—I do not; the one must accompany the other.

1482. There must, therefore, be very active hygienic measures taken in addition to the stoppage of the cattle?—Quite so.

1483. (*Chairman.*) You have expressed your opinion as to the origin of the disease in the county of Kent; have you formed any opinion as to the origin of it in England?—No; unless it be through infection or contagion.

1484. Do you believe that it has been communicated from abroad?—I have every reason to believe so, from all the accounts that I have heard of it, and from the disease being so specific.

1485. In Scotland has the disease been traced to its origin?—It has been traced latterly most distinctly from Falkirk Market.

1486. But beyond Falkirk where has it been traced to?—The first case was a calf that was bought in London, and was sent from King's Cross to Aberdeenshire; that was the first case of all, and that infected many cattle. This was a very recent case which occurred at Falkirk Market; it took place at the end of August or the beginning of September, and in every case it has been traced directly to the buying of cattle there.

1487. And you think it was taken to Falkirk from England?—Yes.

1488. (*Mr. Read.*) By what means?—By cattle being sent from England to be sold there.

1489. Do you believe in the spontaneous origin of the disease?—No.

1490. Where would be the harm in holding the great cattle markets of London, Liverpool, Bristol, and Edinburgh, if all the cattle were slaughtered on the spot?—The only objection I should have would be the danger of the transmission from the country to those great markets, they might communicate the disease on their passage.

1491. How would it be possible for the butchers in those large markets to buy cattle in the country?—It would certainly be a difficult matter, but they might do it, principally through the dead meat market. It would entail great inconvenience, no doubt, and cause great confusion to stop these markets for a month or so; but we are in such imminent danger of a national calamity, that in my opinion stringent measures must be taken.

1492. There would be no great hardship in stopping the local markets?—No, certainly not.

1493. (*Viscount Cranborne.*) Your fear as to the Metropolitan Market is, that the disease might be communicated by the cattle on their passage from a railway?—Yes, it might be so communicated as well as by the road.

1494. Are there any other means besides the railways for bringing cattle to the markets?—Yes, the steamboats.

1495. Are many cattle now driven along the roads and lanes to market?—Yes; I am told that there are a good many cattle from the Metropolitan Market which are driven past Chiselhurst, and they partly attribute to that the cases which occurred in Chiselhurst last week.

1496. Are the Welsh cattle sent great distances along the road in preference to sending them by railway?—Yes; they are good travellers; both the Highland and the Welsh cattle stand the road well, and they are often very little fatigued.

1497. What is about the greatest distance that they travel?—They are sent a hundred miles sometimes.

1498. (*Professor Spooner.*) You spoke of two heifers among Lord Sydney's cattle that were attacked but recovered?—Yes.

1499. Were those heifers treated in any way?—I believe not; they were not treated by me further than getting nourishing drinks; they were not treated by any veterinary surgeon or upon any scientific principles.

1500. Did you observe them after their supposed recovery?—Yes; I passed them out from a shed into a field as they recovered.

1501. Were they very much emaciated?—No; they were in excellent condition, and I attribute that to the circumstance that they were milder cases; one of them was pretty much diseased, but they were both milder cases than most of the others.

1502. Supposing those two cases had not been connected with the other cases which terminated fatally, would you have pronounced them cases of Rinderpest?—Yes, and especially one of them; the other did not show very marked symptoms.

1503. In that case you were led to consider it was this disease because it was in company with the others?—Yes, and I have not known any one instance in which one animal has escaped infection that was in communication with diseased animals.

1504. Has your experience led you to form any opinion as to whether the male or the female animal is more susceptible of this disease?—No. These were all young cattle of Lord Sydney's, two year old heifers.

1505. Which never had had the bull?—No; they were six quarters old. In Mr. Slade's case there were 25 cows and about 36 young stock, and all those young stock have died. There are eight of the 25 cows that have recovered to all appearance.

1506. Speaking generally as to the treatment which you may have prescribed, or which you have known others to prescribe, what is your opinion as to the disease?—We understand that the Privy Council sitting in Spring Gardens have discouraged inspectors entirely from——

1507. I mean what opinion have you formed as to the disease?—I was giving that as a reason why we have not made many experiments and trials. It is essentially a disease of the blood, and unless the blood is purified by a process of nature I do not believe that any medicine can reach it.

1508. (*Chairman.*) Will you state what college you belong to?—I belong to the Royal Veterinary College of London, and I am a member of the Board of Examiners of the Royal Veterinary College for the Scotch division.

1509. (*Dr. Playfair.*) Is there not a certificated body in Scotland besides the Board of Examiners of the Royal Veterinary College?—Yes, there is the Highland Society.

1510. (*Mr. Read.*) (*To Mr. Sharp.*) I gather from your evidence that Lord Sydney's park is divided into several fields; how are they separated?—By hedges, wire fences, and hurdles; some by hedges, some by iron fences, and some by wire fences.

1511. Of course in the case of the wire fences and hurdles the cattle have access to each other; they can come into actual contact?—Yes.

The witness withdrew.

Mr. George Tegg examined.

1512. (*Chairman.*) I believe you were appointed inspector of the markets by the Metropolitan Market Committee?—Yes.

1513. Are you a member of the Veterinary College?—I am.

1514. How long have you held your present appointment?—Nearly six years.

1515. When was it that the outbreak of the cattle disease first came under your notice?—On 6th August.

1516. Will you state what observations you first made?—I observed the symptoms that I had heard of, the peculiar character of the eye, the discharge from the nostrils, and the general appearance of the animal.

1517. You first detected its presence by the know-

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ledge you had obtained?—Yes; I had heard of it from Professor Simonds.

1518. Did you observe any cases in the market?—Yes, a great many.

1519. When did you first observe any case in the market?—The first case that I reported upon was on the 6th of August.

1520. Should you have observed any cases of Rinderpest in the market previously to that if there had been any?—I should, certainly.

1521. Do you think that the people there would have recognized cases of Rinderpest in the market until the case which you saw on the 6th of August?—I do.

1522. What course did you pursue when you discovered this case?—I had them immediately removed from the market and slaughtered; after which I made a post-mortem examination; the flesh was condemned, and the skins of the animals disinfected.

1523. What animals were they?—Cows; I know they were cows, because I remember that we had not a single beast affected in the market for a month or six weeks after it broke out.

1524. In the month of August hardly any bullock was seized with the disease?—I think I can safely say there was not one.

1525. How would you account for that?—I cannot account for it.

1526. To whom did those cows belong?—They came from different dairies in the immediate neighbourhood; they were all dairy cows.

1527. Were any steps taken to assist you in the inspection of the markets on your reporting that the Rinderpest had broken out?—Yes.

1528. What were those steps?—I reported the outbreak immediately to the Markets Committee, and they then wished to know what was best to be done. After consultation they advised that I should have men stationed at each gate leading to the market, and so we commenced on a Sunday night at 12 o'clock, at which time the market commences. I accordingly had men stationed at each gate, directing them to remain there until the market closed at 3 o'clock in the afternoon of Monday; I also gave instructions that they should take down the names and the addresses of the owners of every cow which came into the market, and of the persons to whom they were consigned; that is, the salesmen; also the number on the drover's badge, and his address; these lists being returned to me at the close of the day. I then had some lithographed letters sent out to each inspector in the several districts to inquire whether they had the disease in any of the sheds under their inspection; in addition to this I had two veterinary surgeons with me inside the market, my own slaughter-men, and slaughter-house.

1529. The persons whom you placed at the gates were not veterinary surgeons?—No.

1530. They were not able to detect and to stop any diseased animal that might be coming in?—They were good practical men who had been accustomed to cattle. My instructions to them were, that as soon as they saw anything in an animal that was suspicious, to have it placed on one side, and to send for me immediately. I have been in the market myself from 12 o'clock on Sunday night till 6 o'clock on Monday night.

1531. Were you able with your assistants to inspect all the animals in the market?—I believe we did inspect every one.

1532. What was the particular object of taking down the names of the owners of these cows?—It was a plan that I adopted because I was anxious to know whence they came; it was forbidden that all animals coming from diseased sheds should enter the market; although they might not actually have had the disease, it might still be incubated in the system.

1533. Had you any means of knowing in what sheds in the city there were diseased cows?—Yes, by writing to the veterinary inspectors of the different districts.

1534. Did you ever stop any cows that were coming into the market because you knew that they came from an infected cowshed?—Yes.

1535. Do you believe that the measures which you took were effectual in preventing the spread of the disorder?—I think they have gone a great way towards it. I think they are very good, as far as they go.

1536. Some additional measures have been recently taken with regard to cattle coming to the market only for the purposes of slaughter; how have they worked?—They have worked pretty well; but I would remark that we have no power to mark any animals that are not sold.

1537. Will you state what you do?—If I understand the Order in Council, it is, that all animals shall be sent to the market to be sold for immediate slaughtering as soon as they are sold. When sold, the cattle are marked as per order in the usual manner—that of clipping the hair off the tail.

1538. Take the case first of the animals that are sold, what proof have you that they are sold for slaughter only?—The aforesaid mark, it being only used upon cattle intended for slaughter, as it deteriorates the value of an animal for future sale to the amount of 2*l*.

1539. That would not prevent an animal from grazing?—No, it would not.

1540. You have no further proof that these animals are sold for slaughtering except the cutting of the tails?—I have not.

1541. Where do these animals after being sold go?—They go to different markets. I suppose there are from 300 to 400 that go to the Birmingham Market every Monday.

1542. Alive?—Yes; and some go to Chatham, Plymouth, Portsmouth, and various other places.

1543. Referring to those that go to Birmingham, are they exposed for sale alive in the market there?—Yes. I have every reason to believe that they are.

1544. With their tails cut?—With the usual mark.

1545. (*Mr. Read.*) What is the usual mark?—As above mentioned; but Government contractors have various other marks, such as an arrow, a ring cut round the tail, and others where the tails are square.

1546. The animals that are sent to Birmingham are not bought under a Government contract?—No.

1547. Although they have their tails cut they are exposed for sale alive in the Birmingham Market?—I believe they are.

1548. With regard to those which are not sold, what proof have you that they remain in London?—I have no proof whatever.

1549. Is there not every probability that they are returned to the districts from which they came to be slaughtered, or to be exposed for sale in other markets?—If the owners think fit to do so they can.

1550. Do you consider that the Order in Council works well with a view to preventing the spread of the disorder?—I cannot say that it does. It occurs to me that if all cows in London sheds could have some particular mark put upon them, we should know if London dairymen sent any to the market, and should not allow them admission, or, if admitted, they would be placed by themselves, and not allowed to go out alive.

1551. This refers entirely to the London dairy cows; but do you believe that any such system could be applied to other cattle that were sent to London?—I do not think it could.

1552. There would be no means of slaughtering them in London?—I do not think there is sufficient accommodation, and that it could not be done. I do not know what would be done with regard to the Government contracts. There is a large quantity of cattle going out for Government purposes.

1553. Do you think the animals might be slaughtered in London, and the meat sent to the places where it was required?—I think not; but if we could ensure their being killed as soon as they

got to their journey's end I think that that would be quite sufficient.

1554. You have spoken as to the home cattle; what do you say as to the foreign cattle?—The foreign cattle are particularly healthy, excepting a few of the Dutch animals. We have also a large number of Spanish beasts, and they are the finest and most healthy that ever came into the market.

1555. Have you had many diseased cattle from Holland?—Very few; I think not more than half a dozen.

1556. Do you remember the date when you first observed the disease among the Dutch cattle?—No; but I know it was a Dutch beast that came from Mr. Defries, who consigned it to his son to be sold.

1557. Have you any means of ascertaining the date when that occurred?—Yes, I can supply it.

1558. Does Mr. Defries often send cattle over to this country?—I believe he does. The father is over there, and the son is a salesman in the market.

1559. How do you think that the new Order in Council as to animals coming to the market only for the purposes of slaughter will affect the foreign cattle?—The foreign cattle all come to be slaughtered, except those that come for the Government contracts, and they are most of them foreign, and so are those that are sent to Birmingham.

1560. You do not believe that this order will prevent the importation of foreign cattle to any large extent?—No, it certainly will not prevent it. I do not see how it can affect them coming in at all.

1561. (*Dr. Playfair.*) Was the date when you saw one of Mr. Defries' cattle in a bad state on the 22d of June?—No.

1562. Was it later than that?—Yes; September 14th.

1563. Have you ever seen any disease among the Hungarian cattle?—I have not.

1564. (*Professor Spooner.*) Have any cattle that you have observed in the market affected with the disease been more particularly foreign or English cattle?—English, or Dutch cows that have been some time imported; I should think 99 out of 100.

1565. And principally cows?—Nearly all cows; in fact, I do not believe that I have sent out 20 beasts since the outbreak, but I have many hundred cows.

1566. When did you say that you saw the first case in the market?—August 6th.

1567. Was it a foreign or an English cow?—An English cow. I had not a foreign case for a very long time after the first outbreak.

1568. Are not a great number of foreign cows kept by London dairymen?—Yes; but when I say foreign cows, I do not mean freshly imported ones, but Dutch cows which have been in the country some time.

1569. Still they are foreign cattle?—Yes.

1570. I want to know whether from your experience you think that foreign cattle which have been for some time in this country are more prone to the disease than English cattle?—I do not. I do not think, from what I have seen, that I should be justified in saying to the contrary.

1571. Nor in drawing any distinction between the one and the other?—None whatever.

1572. To what do you attribute the fact of the disease being principally confined to the cows in the metropolis; or are they most prone to it?—I think it must be from the manner in which the cows are kept in close, ill-ventilated places; not that they are more prone to it.

1573. Oxen are not kept in London?—No, or only for a few days at the most.

1574. You have had no evidence of the disease existing in the country districts at all?—I have, in my own neighbourhood. I can mention a case that happened on the estate of Mr. Samuel Morley, M.P. I was called in to see the case the other day, which was a very clear one, there not having been a cow outside the premises since the first week in June; none of them had been in sheds; they were all in paddocks, and had never been within 500 yards of the high road.

1575. A case broke out there?—Yes, and they lost three cows and two calves.

1576. Are the Commissioners to infer from that that it is your opinion that the disease is propagated in this country?—Yes.

1577. It arises here, and it is not an imported malady?—I do not think it is.

1578. Do you believe in its infectious character?—I do.

1579. Do you think it is highly infectious?—I think it is.

1580. Can you name any particular locality or place where you think the disease was first originated in this country?—I have reason to believe that it originated at Islington. My district (Hackney) is very bad; I should suppose there is not a worse anywhere, there being scarcely a shed that has escaped the disease.

1581. Do you suppose that the disease originated in one particular cowshed, and then spread itself by infection to all the others in the metropolis, or that it broke out simultaneously?—I think in the latter way.

1582. That is your conviction?—Yes.

1583. Have not the cowsheds of the metropolis of late years undergone important improvements in the general sanitary arrangement of them?—They have; but still I think there is room for much greater improvement.

1584. Can you mention to the Commission any causes which have presented themselves to your mind as being calculated to account for this disease having occurred this year, and not in antecedent years?—I cannot.

1585. I am to infer that you consider the sanitary condition of the metropolitan markets and the London cattle sheds is quite equal now to what it has been for many years past?—It is decidedly improved.

1586. Have you any reason to suggest why this special disease should have been engendered among our cattle this year?—I have not, not the slightest. I do not know whether I ought to have mentioned the manner in which the market is cleansed, but it is washed down every week thoroughly, and disinfected.

1587. But that has taken place, as I understand you, since the outbreak of the disease?—Yes.

1588. (*Dr. Quain.*) Referring to Mr. Morley's cows, is it your impression that the disease was generated among them under the most favourable circumstances in which cattle could be placed?—There is not the least doubt of it; it is a most delightful place, surrounded by trees, and the cattle were not within 500 yards of the high road.

1589. (*Mr. Read.*) You think that in that case it broke out spontaneously with the best management, and you think that it broke out in the dairies under bad management?—Yes; I think that it broke out spontaneously.

1590. Is it a new disease to you?—Unquestionably.

1591. You never saw it before?—Never.

1592. I think you stated that the first case you saw was on about the 31st of July?—It was on the 6th of August.

1593. When did your more rigid inspection commence?—It commenced immediately after the outbreak.

1594. Do you know Mr. Priestman, the inspector of Islington parish?—Yes, I do.

1595. It has been stated in evidence that on the 10th of July there were 200 diseased cows in the Metropolitan Market; do you think that that was the fact?—No, certainly not.

1596. You have stated that none but cows were affected with the disease?—Not for a very long time.

1597. Do you mean heifers and cows?—Yes.

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1598. Do you include among cows heifers that have not been milked?—Yes; but I think I should not include them at the commencement; they were milch cows.

1599. Do you remember that on Monday the 7th of August you seized a good many cattle?—I know that I made some heavy seizures several times; we had 40 odd from a person of the name of Hatt.

1600. Do you remember on that day seizing and condemning four Welsh grazing heifers?—Yes; they were trucked in from the railway.

1601. Do you happen to remember on that day seizing a Dutch cow, and killing it in my presence in a shed?—We had a Dutch cow. Was it a fresh imported one?

1602. It was a Dutch cow.—I asked the question because if it had been a fresh imported one I should remember it.

1603. You do not remember the case of the four Welsh heifers that you condemned?—Yes.

1604. Nor the carcase of a bullock or steer that was thrown outside the slaughter-house, and covered over with creosote?—No; if I had my report book here I could give you the necessary information.

1605. You have stated that you had none but cows affected with the disease; but on the day to which I refer there were four Welsh heifers, and the carcase of a steer outside which was done over with creosote?—I could clear the matter up by reference to my report book; but sometimes we have cases of oxen, foreign beasts, where they have been kept so long without water that when they come here they drink a large quantity, and inflammation of the bowels comes on, and they die; they are in a frightful state; we are obliged to condemn them; but if any animal had died with the Cattle Plague I could give you the information after referring to my report book.

1606. I observed that the market this morning was wonderfully clean?—Yes, particularly so.

1607. Is it always as clean as that; I refer particularly to the cleanliness of the stones?—It is washed down every week, and we have lately had some heavy rains, but it has been quite as clean as that for months.

1608. What was the sort of inspection that was made with regard to the 6,000 bullocks before the present stir was made?—I had the whole management of the 6,000 or 7,000 beasts, and between 30,000 and 40,000 sheep, besides pigs and calves, and all the slaughter-houses, without any assistants.

1609. Could you give that large number of animals any kind of minute inspection?—I did the best I could.

1610. Were not a large number of the sheep that were sold this morning in the market store sheep to go into the provinces?—No doubt of it.

1611. Is there any reason why a grazier should not go into the market now and buy any quantity of store stock that he liked, and take them away?—There is no prohibition.

1612. And anyone so inclined could do it, might he not?—Yes.

1613. (*Viscount Cranborne.*) You have spoken of having made several heavy seizures; do the persons from whom you seize offer many protests, and assert that the cattle are seized without sufficient reason?—Very, very seldom.

1614. Why?—Because my instructions are to prosecute in any case where we find them.

1615. Are you to prosecute any one who brings a diseased cow to the market?—Yes, or for bringing any cow out of a diseased shed.

1616. I presume you only seize in cases where the disease is very distinctly seen?—If there be the slightest suspicion connected with them I have them immediately removed out of the market, and all the animals that have come with that lot; they are taken to the slaughter-house, and examined after death.

1617. What becomes of their bodies?—We pass them if they are good for human food.

1618. Are they restored to their owners?—Yes; they have everything except the skins, which are disinfected.

1619. You never have any protests made?—I can remember but one only.

1620. What, practically speaking, are the objections to having the whole of the cattle that are brought to the London market slaughtered there?—The expense is one thing, because those who have their own slaughtering houses do not like to pay about 4*s.* each for killing them at the market; I do not know that they have any other objection.

1621. You see no other objection to such a practice than the expense it would impose upon the owners of the animals?—No; there is no objection to their being slaughtered in the market, and the meat is worth a halfpenny or a penny a pound more.

1622. Why is that?—In the first place they are not driven a long distance, and these slaughter-houses are so beautifully ventilated.

1623. If the accommodation is not sufficient at present, would it take very long to erect temporary slaughter-houses?—Not very long, I should think.

1624. (*Chairman.*) How are these slaughter-houses regulated; do they belong to the Corporation of London?—Yes, and they are let to tenants.

1625. Do you know how many there are?—Seven.

1626. Are yards attached to them for the cattle that are driven there?—Yes, each of them has a pound.

1627. How many cattle will it contain?—Twenty to thirty. They also have a large paddock in front and behind them.

1628. And how many would the paddocks contain?—Several hundreds.

1629. Can you state the number a little more precisely?—I should say that they could accommodate for a short time 800 to 1,000.

1630. Can you state how many cattle the lairs and slaughter-houses would accommodate?—The lairs would accommodate I think about 3,000 beasts.

1631. And the slaughter-houses an equal number?—They would take a few, say 20 or 30 to each.

1632. I understood you to say that there were paddocks also?—Yes. The market stands upon 75 acres, but the market proper occupies only 14, and you may judge how much is left.

1633. Do those paddocks belong to the owners of the lairs or to the corporation of London?—They belong to the corporation. There is lairage room for 3,000; but there is room in the market area to build lairs to accommodate five times that number.

1634. You stated in answer to Lord Cranborne that when you find any infected animals you send them to the slaughter-house, and that both the infected animals were slaughtered and the animals in company with them. Is that the case?—Yes.

1635. What becomes of the meat of the animals that are not infected with the disease?—That is passed for human food.

1636. Under any guarantee that the meat is wholesome?—It is quite sufficient guarantee that they are allowed to take it away, for everything is examined before it goes.

1637. But how can you know which is the meat belonging to an infected animal and which is the meat belonging to an animal not infected?—I place a mark upon the animal, and the skin is not detached until after I have examined it.

1638. (*Professor Spooner.*) Under what circumstances does that take place?—In all cases of diseased animals.

1639. (*Chairman.*) What becomes of the meat of the diseased animals?—It is destroyed and disinfected, after which sent to the boiling-house and boiled.

1640. How is it destroyed?—By creosote and chloride of lime.

1641. The wholesome meat is given to the owner, and he then takes it to the market, and sells it?—Yes, in the usual way.

1642. (*Viscount Cranborne.*) I suppose that the

meat of an animal slightly infected is wholesome?—Yes, I believe so.

1643. (*Chairman.*) Is the practice of burying the carcases of diseased animals carried out in the city?—Not in the city.

1644. But it should be, according to the Order in Council, should it not?—Where it is practicable it is done, but it is impossible to do it in many places.

1645. Is it impracticable in the city?—Quite so.

1646. There is no open space in which to bury them?—No.

1647. Do you consider that the mode of disposing of them which you have described is as effectual as burying them?—I think quite so.

1648. The hides I understand are not destroyed; they are only disinfected?—Only disinfected.

1649. (*Mr. Read.*) How are they disinfected?—By chloride of lime and other disinfectants.

1650. (*Chairman.*) Is the drainage from the slaughter-houses disinfected?—Yes. The Markets Committee have taken upon themselves to remove all the manure and the refuse from the slaughter-houses; it is all placed in a heap, and thoroughly disinfected. To every layer of manure, there is a layer of chloride of lime.

1651. (*Dr. Playfair.*) You have not sold any of that yet, have you?—No, not any.

1652. (*Mr. Read.*) There is a very large heap of it, is there not?—Very large indeed.

1653. What was the general state of the health of the cattle this morning?—They were particularly healthy; a very marked improvement has taken place in them, and I think that that has been in consequence of taking down the names of the owners at the gates; it seems to have had a very beneficial effect, for they seem to be very timid indeed now about sending in their cows. I only made one seizure during the whole of last week.

1654. Have you made any seizures to day?—None.

1655. Have you not observed that the foot and mouth disease has become very general?—We do occasionally see it.

1656. Not only occasionally, but generally, this morning?—Yes, it has been so.

1657. Should you not say that at least half the cattle in the market this morning exhibited symptoms of the foot and mouth disease?—No; but there were a great many.

1658. Of course foreign cattle are as liable to have that disease as English cattle?—Yes, quite so; but we do not attach much importance to it, as it does not affect the meat in any way.

1659. I think you would say that the foot and mouth disease is more prevalent now than it was a few months ago?—Yes, it is. It disappears altogether for a few months in the year, and comes on again in the spring and autumn, when it mostly prevails for a month or two, after which it will disappear.

1660. Is pleuro-pneumonia prevalent?—There is very little indeed of it.

1661. In the cases of pleuro-pneumonia which you have seen, were they mostly cows that were affected?—I think I may say that they were almost invariably cows from the cowsheds.

1662. In fact the chief amount of disease of one sort and another you would trace to the London cows?—No question about it; 19 out of every 20.

1663. I mean previously to the recent outbreak?—Yes; speaking of the lung disease, certainly quite as large a per-centage as I have given.

1664. (*Dr. Quain.*) With regard to preventing diseased animals from entering the market in the very earliest stages of the disease. Are there any symptoms by which you can judge, or could you say that the disease was or was not present in its very early stage?—It would require a person to be very cautious in his examinations then.

1665. The men who watch the cattle enter the market are not competent to judge as to whether they are in an early stage of the disease or not, are they?—They are men possessed of a considerable knowledge of cattle. Should they see any animal which gives the least cause for suspicion, their instructions are to place them aside for my inspection. I have also the assistance of two veterinary surgeons, who with me examine every beast in the market.

1666. You think it is impossible that diseased cattle could be sold now in the market?—Yes, with the attendants that we have.

1667. With regard to the disinfecting process, who superintends that?—I do.

1668. I mean the disinfection at the slaughter-houses of the hides and horns?—Myself. There is very little of that done now. I do not think we have had more than two or three cases in the last fortnight.

1669. Take the hides and the horns, how would they be disinfected; what is the process?—It is done by chloride of lime.

1670. Do you steep them in it, or is it done by sprinkling?—By sprinkling.

1671. Is that sufficient?—Yes; they are first sprinkled, and then drawn along the floor, which is previously covered with chloride of lime.

1672. On both sides?—Yes.

1673. Is that done in every case?—Yes.

1674. (*Dr. Playfair.*) Is it dry chloride of lime that is used?—It is dry; the skin itself is moist, and absorbs a large quantity.

1675. (*Professor Spooner.*) I think I understood you to say that the disease is seldom met with now as compared with three or four weeks ago?—We are particularly clear now. I have had a great number there in a day, but we have not had more than one for the last week.

1676. To what do you attribute this change?—A great deal of it is the result of taking down the names, and also from persons not being allowed to send animals out of diseased sheds without the certificate of the Government inspector, and there are not nearly so many to send, for the cattle sheds are nearly empty. I can mention many cases, in one of which there were 150 cows, where only six survived; another had 115, and lost all. I believe that there are scores of sheds where they have not one left.

1677. Have you attended many cases with a view to the cure of the disease?—Yes, a few. I attended Mr. Morley's. I also had some cases on the opposite side of the way. Three gentlemen living on Stamford Hill had all their cows taken with the disease, in consequence of a cowkeeper, who had 150 cows, leaving a dead cow in his field unburied for two or three days, and these gentlemen, whose fields adjoined, had all their cows infected. I saved one out of three.

1678. Have you had opportunities of observing the disease in all its phases, and the symptoms of it?—Yes, I have.

1679. And the post mortem appearances?—Yes.

1680. Have you any reason to believe that any change has taken place, since the first outbreak, in the general symptoms of the disease?—I have. I do not think it is so virulent now as it was; I believe it assumes a milder form.

1681. Do you believe that the animals which become affected by it live longer than they did?—Yes; I am satisfied of that.

1682. Are you of opinion that in more cases animals recover now than on the first outbreak of the disease?—I am satisfied of that.

1683. Do you feel sure of it?—I am sure of it. We have had several cases in our immediate neighbourhood where animals have recovered lately; but I think that the Dutch cows get over it more easily than the others.

1684. That is your impression from the observations you have made?—Yes, and has been for some time.

1685. You mean that Dutch cows which have been previously kept in England for some time, and

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then become the subjects of the disease, are more likely to recover than English cows?—Yes.

1686. Have you seen many cases of recovery?—I have seen several.

1687. As many as 20 or 30?—Yes; 50.

1688. Cases of recovery?—Yes.

1689. Have you found that the condition of those animals which so recovered was very materially affected so as to require a long time before they could again get up their condition?—No; I do not think so.

1690. They have not not become very materially emaciated?—No; I do not think so.

The witness withdrew.

Adjourned till to-morrow at 12 o'clock.

Friday, 13th October 1865.

PRESENT:

Earl Spencer.	Dr. Parkes.
Viscount Cranborne.	Mr. M'Clean.
Mr. Lowe.	Mr. Wormald.
Dr. Lyon Playfair.	Mr. Ceely.
Mr. Read.	Professor Spooner.
Dr. Bence Jones.	

EARL SPENCER IN THE CHAIR.

Mr. J. Giblett. 13 Oct. 1865.

Mr. John Giblett examined.

1691. (*Chairman.*) You are I believe engaged in the cattle trade?—Yes; and I have been so for the last 30 or 35 years.

1692. Will you describe what your business generally is?—Merely selling cattle in the Metropolitan Market. I never have any of my own except from private grazing. I sell cattle on commission as a broker (of the firm of Giblett and Son) in the market. I have often sold above 300 a week for many years together.

1693. Cattle are consigned to you from different parts of the country by the farmers?—Yes, through all parts of England, Scotland, and Ireland, and from most parts of the Continent.

1694. With respect to the home trade, have you direct communication with the owners of the cattle, or is there any middleman who comes between you and them?—There is no middleman, except those who buy cattle; then there are the owners. We generally have letters sent to us of the consignments, and our men are always at the termini to receive the cattle. We immediately remit the money, and it is paid the same day or the next morning; and a great many large transactions take place in which we never see the owners at all.

1695. With regard to the foreign trade, are you in communication with foreign dealers?—To a very considerable extent.

1696. With regard to the Cattle Plague which has broken out; when was it first brought to your notice?—The first and most serious case which came to my notice was that of Mrs. Nichols in Liverpool Road, Islington, who lost I believe 105 cows. When I say "lost," there are a great many cowkeepers who say that large numbers of their cows have been swept away, but several having died they send the rest away as quickly as they can, therefore they are not entirely lost.

1697. Do you know the particulars of that case? No, I do not. I have my own views upon the case.

1698. Will you state what your views are?—Some time since I wrote a letter on the subject, published in the Times, and I have no reason to alter the views contained in that letter. I have had a hundred communications approving of that letter. I believe that there has been a baneful atmospheric influence. I do not at all believe in the reiterated statements of a few persons that it is an imported disease; on the contrary, I know that we have had diseases among cattle for a great number of years past; we have had the lung complaint; we have had what is termed the foot and mouth complaint, but in my humble view of the case the foot and mouth complaint is no complaint in itself; it is the result of a complaint in the animal; that is my conclusion from my experience upon the subject; the foot and mouth complaint is merely the result of a fever in the animal. In a hide-bound animal having fever it cannot escape except through the hoof, or through the mouth and tongue. 25 years ago I saw 80 animals in a day killed in Smithfield Market from the foot and mouth complaint.

1699. Then is it your opinion that this Rinderpest has been in existence for some time in England?—I believe that the extreme heat of the weather this summer has made the diseases to which cattle have been long subject a great deal more virulent.

1700. Do you believe that the seeds of this disease have been in existence for some time in England, previous to the month of June?—Certainly I do; I see vegetation affected to a serious extent; potatoes and turnips, and even the hedges affected. When the easterly winds prevail I know that that which we call the foot and mouth complaint is generally much worse, which is a proof that it is atmospherical. Neither do I believe in the statements which have been reiterated as regards the disease coming by a cargo of animals from Revel. It is astonishing to see the quantity of foreign stock which now comes. Last week I sold about 500, and only 35 English, although I am reputed to sell as many good English oxen as any person in the trade.

1701. Do you believe that there have been many instances in which foreign cattle have been disposed of in the market which have been suffering from this disease?—I do not know of one; I have never had one of mine retarded in any way.

1702. Will you state from what countries of Europe the foreign cattle come?—I have sold for many years past from 2,000 to 3,000 oxen a year from Oporto. I never saw one of those diseased, except that after they had been in this country for some time they might have had the foot and mouth complaint.

1703. I suppose that these are Spanish and Portuguese cattle; where do they land in England?—Most of them land at the Dublin Wharf.

1704. In London?—Yes; some of them used to come to Southampton, according to the direction of the owners.

1705. What are the other countries from which you receive foreign cattle?—I am canstantly receiving now from Oporto and from Spain; a large quantity come through Corunna. For many years I have had a continuous quantity from Tonning.

1706. Can you state the numbers which you have received from Tonning?—For the last 20 years about 100 a week during the time of their importation?—

1707. To what country do the animals belong?—

They are what we term Jutland beasts; they come from Jutland, and they are fed in Schleswig-Holstein.

1708. Do you get many Dutch cattle?—Personally I sell very few Dutch cattle.

1709. But a considerable number come from Holland?—A great many, and Dutch sheep, in immense numbers.

1710. Do you get a large number of Hungarian cattle?—Occasionally. I had some in market last Monday; they are mostly a grey kind of cattle.

1711. How do they come; what route do they follow?—They chiefly came from Hamburg.

1712. (*Dr. Playfair.*) How do they go to Hamburg?—I do not know.

1713. (*Chairman.*) Are you acquainted with the regulations in foreign countries with regard to the movement of cattle, whether there is any system of inspection?—Yes; I belong to an association, and we constantly have intelligence of all the cattle being inspected before they are sent from abroad, and I have personally great faith in the gentleman whom the Government has appointed to inspect the cattle at the wharves here, Mr. Simonds, and Mr. Holman, another gentleman with him.

1714. I am speaking more especially with regard to the inspection abroad before the cattle leave the foreign ports; do you believe that that is sufficient?—It appears so when out of the many thousands which come we hardly find any affected.

1715. Have you heard of any cases of beasts which have been stopped abroad in consequence of these inspections?—No; my experience has been chiefly confined to my trade at home.

1716. With regard to the home trade, do nearly all the cattle which come to you come by railroad, or are any driven by the road?—The majority come by the railway, and some by steam from Scotland. I sell a large quantity of good Scotch cattle, and have done so for many years.

1717. Has the presence of this disorder very much checked the home trade in cattle?—It has checked the feeding, and it has caused a great many to be sent away through fear in a lean state; there has been an immense loss of cattle sent away from the apprehension of the parties to whom they belonged; there has been an immense quantity of cattle sent away unfit to be killed, at a serious loss. Devon beasts, which made about 13*l.* or 14*l.* apiece, would, if they had had an opportunity of being fed, have been worth 24*l.*

1718. Do you allude to the regulation now in force in the market, that cattle should only be sent up for the purpose of slaughter?—No. I am more particularly alluding to the fear and apprehension of graziers in many cases which has caused them to send cattle away. I also think that a great many are condemned to be killed which are good. In nine cases out of ten when they are condemned they are pronounced to be wholesome, and the meat is afterwards eaten.

1719. Do a great number of graziers, where the disease has broken out, now send up for slaughter animals which they otherwise would keep for grazing?—Yes, a great many. If the disease has broken out in a district the neighbours become alarmed, and they send off their cattle, which are sold at very inferior prices. Our London Market is a transit market to a great extent. More than one third of all the quantities that come throughout the year go into the country again; quite two thirds of all the best beasts, the high-priced beasts, which I sell, go some considerable distance out of town, into the country.

1720. Do you allude now to fat animals, or those sent for stock?—None are sent to our market for stock.

1721. Then I understand that a fat beast is sent up from the country to London, and is bought there, and sold again to another butcher?—Yes; the London Market supplies every town round the coast. Nearly 1000 beasts a week go into Kent, and at this time of the year we supply with meat all the towns from Brighton right round the coast from the London Market.

1722. Do you not believe that that is a means of communicating the cattle disorder to different parts parts of the country?—It may be a means of doing so. If the cattle here were affected, of course it would be a means of doing so; but I do not believe that it is the means by which the disease is generally spread. Yesterday I sold some cattle, as I do every week, to go to Yorkshire, to Wakefield, and large quantities to Birmingham. A gentleman stated that he is determined not to buy any English cattle at all, there being so much danger about them. He has bought some which have died, and he comes here to buy those cattle which he knows are sound, and they are invariably foreign stock, and sometimes there are 150 a week which go to Birmingham and to Wolverhampton from our London Markets, and to Wakefield, and in fact round the country, and now that the fairs are annihilated it brings a greater number of butchers to the London Market.

1723. What is your opinion of the last Order in Council, which prohibits animals from coming to London, except for the purposes of slaughter?—It had at first a very serious effect upon our trade; prices were considerably reduced at first. My opinion was asked upon the subject, and I was averse to such a law being made. Although the tails of the animals are cut, which is the usual mark which we have of their being sold, yet that does not prevent their being sold again in the country. These markets and fairs in different districts having been abolished by the municipal authorities in different places, it causes men to come up here to buy larger quantities. For instance, these jobbing men very often supply to the smaller butchers their meat; they are dependent upon the men who go from their homes to the London market to buy the cattle.

1724. Then you are opposed to the measure, and you do not think that it has had the effect which the Government expected?—It certainly would not have the effect of stopping cattle from being bought in the London market, for the sake of supplying the country, because it is an absolute necessity. In many working districts, and in all these large towns, it seems now to be the habit of the people to have the meat; it becomes a matter of necessity, and the dealers could not supply them in their different localities, if they did not come to London for it; there is not enough for the purpose without it; there are only a few counties which feed enough for their own supply, such as Norfolk, during a particular time of the year, and Ireland and Scotland. There are other counties which do not feed one twentieth part sufficient for the people.

1725. Then you are opposed to the closing of all fairs and markets in the country?—I think that while cattle are affected round about, it is a very desirable arrangement to close the fairs, especially for store cattle. All our cattle which are sent to the London market are intended to be killed, and although they go into the country they are generally killed within a week, because it would not answer the purpose to keep them alive; they sink fast.

1726. Is there not now a considerable trade in meat alone, the animals being slaughtered in the country?—Yes; and it will be an increasing trade. From Scotland a great many more come dead than alive; sometimes there are 300 a week alive, and I should think 600 oxen a week dead from Scotland alone. That is in the cold weather, when the weather permits it; but there are times of the year when the weather will not render it practicable for them to kill the animals in the country and send them up great distances.

1727. In winter do you think that it would be practicable to confine the butchers' trade in the country to meat alone, and to prevent all movement of live cattle?—It would be fearfully arbitrary; it would be contrary to a free constitution.

1728. Would it be practicable?—It would be

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practicable, but I do not see the benefit of it; it would be practicable, under certain difficulties; it would be seriously injurious to the trade in general.

1729. What would be your means of putting an end to the disorder in the country; have you any suggestion to make as to checking it?—I think that there are very excellent arrangements as regards the stopping of fairs for the sale of lean stock, but I am apprehensive that although that may be a good thing it will have a serious effect upon the supply, and I think that we should be very grateful that we can get a supply from abroad. The fact is that our own supply is diminishing, and our demand is, without doubt, increasing. Some of our beasts in England are very diminutive, compared with what they are abroad. There is now a new trade opened from France. I have sold 1,000 oxen within the last five or six weeks from Normandy, and those 1,000 oxen have averaged about 25*l.* apiece. It will be an immense trade eventually. They get the best breed; they get the short-horned blood; they get as good blood as we do, and better keep. I have at this time of the year sold some animals at 35*l.* 10*s.* from France, and last Monday I sold some at 30 guineas each, as fine animals as I ever saw in my life, both dead and alive.

1730. Any regulation stopping all movement in your trade would in your opinion greatly affect your import trade?—It would be lamentable. I cannot imagine the propriety of its being thought of; it would stop the people from being fed.

1731. It would not be desirable to have the animals slaughtered at the ports where they were landed, or to have them sent over dead from France or countries near?—No. They are very strict as regards the foot and mouth complaint, and have been so for many years as respects the cattle landed here, and I have known whole cargoes which have had to be killed at the wharves at the loss of 3*l.* a head. When the foot and mouth complaint became general the Government inspectors, I presume acting under orders, were very strict indeed, and when one or two oxen have come with the foot and mouth complaint I have known a whole cargo of 200 oxen stopped, at a loss of 3*l.* a head in consequence; they have been killed, and thrown into the market when they were not wanted.

1732. (*Mr. Lowe.*) Am I to understand you to say that you have seen this Rinderpest or Cattle Plague in England before this summer?—No.

1733. Then upon what do you found the opinion that it has existed in England before this summer?—I do not know that it is the Rinderpest.

1734. What do you think it is?—I think that cattle have been subject to serious illnesses prior to this year. I can take the case of Mr. Thomas Duckworth, a highly respectable man; I believe that he, three years ago, bought 20 oxen at 21*l.* 10*s.* a piece, and 10 of them died.

1735. What did they die of?—It was generally thought to be the lung complaint.

1736. That has been in existence for several years?—Yes.

1737. Then do you identify this present disease which is raging among cattle with pleuro-pneumonia?—No.

1738. Why do you think that this same disease has been present in England before?—I did not say this same disease. I mean that disease has been very prevalent, and this may be a worse feature of the diseases which we have had in a milder form for some years.

1739. Are you acquainted with the medical peculiarities of this disease?—I am aware of all the symptoms of it externally, but I have not attended any anatomical dissections.

1740. Have you ever known a disease in this country before with exactly similar symptoms?—Externally I have observed the same symptoms.

1741. As indicating what disease?—The disease which has been so general, particularly the foot and mouth complaint and lung complaint; the animals have running at the eyes, and also shortness of breath, and many of those symptoms, such as shivering and cold.

1742. Do you believe that this disease is only an aggravation of the foot and mouth complaint?—I believe it is fever in the animal from atmospherical causes, and that it has been aggravated by the extreme heat of the weather, and become more virulent.

1743. Do you believe that the London market has had anything to do with spreading the disease over the country?—As regards the cows out of the sheds. I believe that it is probable that they have had to do with it.

1744. You think that they have been sold in the market, and taken to different parts of the country, and that they have generated the disease there?—I think that is probable.

1745. Do you propose any remedy for that?—The majority of the cows are extinct.

1746. But other animals are sold there under similar conditions?—If they have any symptoms of disease about them they are not allowed to leave the market to go into the country; they are examined again.

1747. What is done to prevent their leaving?—The inspectors are all very vigilant in their inspection of them, and they are not allowed to go into the country.

1748. Supposing that an animal has the disease latent in him, and not developed, the inspector cannot find it out, and may not such an animal be sent into the country with the disease?—Certainly.

1749. Can you suggest any remedy for that?—There are hardly any dairy cows bought now to go into the country; the matter has almost cured itself. Inasmuch as the cows have been reported to be bad, they are scarcely allowed, I think, to go into the country; hardly any person buys town's end cows for that purpose. Persons buy the foreign stock because they know that the foreign stock are sound.

1750. Supposing that any one sends an animal into the market which infects other animals, how can that be prevented?—If it is in an incipient state it can hardly be prevented.

1751. Are you of opinion that the country markets should be closed?—I confine myself to the fairs where live stock are congregated together. In those localities where the disease has been known to be prevalent among live stock I think it very desirable that the fairs should be prohibited.

1752. But not the markets?—Certainly not. As regards the markets, where the butchers come from 10 or 20 miles round, I do not see the necessity or importance of their being stopped.

1753. And you would not stop the London market, though it has been the means of disseminating the disease through the country?—The result of stopping the London market would be so serious that the public would have it altered very shortly.

1754. How would it be so baneful?—Because in different localities they could not get the meat.

1755. Why not? Would it not be possible to get meat except in the shape of live animals?—It is possible, but not very practicable, as a general practice.

1756. Why not?—It would be attended with serious expenses.

1757. One effect, I suppose, is, that it would raise the price of meat?—Very seriously indeed.

1758. How do you suppose that we are to get rid of this disease, which we have now, according to the plan which you propose?—Believing it to arise from a baneful atmospheric influence, I have the full hope of the cold weather causing it to disappear.

1759. If the cold weather does not happen to do that for us, what then?—It is our duty to take every step in our power.

1760. What step?—Stopping the country fairs is one step, but not the country markets. I do not see the benefit of that.

1761. Do you think that if the atmosphere does

not take compassion upon us, and allay the disease for us, stopping the country markets will do all for us?—I think that the cold weather will do much to annihilate the disease.

1762. Suppose that it does not?—It is a dispensation of Providence.

1763. And you must let Providence have its way?—We have not had much assistance in the matter from the medical profession, certainly. We naturally look to them for help. It is hardly to be expected that we can suggest any means. I will observe that on a late occasion which came before Parliament with regard to the foot and mouth complaint, it was the opinion of Professor Simonds that it was entirely an atmospherical influence. This is a letter which it was my duty as chairman of our trade to send to each of the Members of Parliament, in which there is the following sentence:—"The Committee further desires "to impress upon you that the character of the 'foot and mouth complaint' shows that it should "not be legislated for as a purely contagious disease, "it being an established fact that animals which "leave the premises of their respective owners in a "state of perfect health are often affected by this "epidemic before they reach their destination, and "this solely from an atmospherical influence." That was the opinion of Professor Simonds. He was at the meeting, and coincided in the propriety of that step being taken, and that clause being inserted. If it was an atmospherical influence, then this particular disease may be upon the wings of the atmosphere now. If it is an atmospherical effect we cannot stop it. The best way is to cure it if we can. It appears to be spontaneous in Wales. We have a great many beasts sent up from Wales. It appears to be spontaneous in many cases where there have been no foreign stock at all.

1764. (*Dr. Playfair.*) I did not quite understand what you said with regard to about one third of the total cattle in your market going down to the provinces?—Certainly quite one third or more than one third of the whole supply coming to our cattle market is not sold for London consumption. It goes out of London; there are the suburbs of London, there is 20 miles round, and there are all the towns and cities.

1765. Is not the number of cattle sold in your market about 350,000; was it not 339,000 last year?—Yes, I think so. It is about 7,000 or 8,000 per week.

1766. Taking the number last year, 113,000 head of cattle, or fully one third, would go out of London in a live state for the provinces?—Yes; 99 out of 100 leave the market in a live state.

1767. But they are killed in London?—Yes, and in the suburbs of London, and the towns to which they go. There are so many difficulties connected with the abattoir system, and killing them near the market, and there is such danger of the parties not having the internal part of the animals, the fat and so on, that they do not like to trust that matter in the hands of other men; it entails upon them the necessity of so many men to look after it.

1768. (*Mr. Wormald.*) Did you not state that you believed that the hide-bound condition of the animal always preceded the foot and mouth disease?—No; I said that I did not believe that the complaint of the foot and mouth was a disease at all; that I thought that it was the effect of a disease; that the fever in the animal, being hide bound, could only escape through the foot or mouth. I am speaking of the hide which is over the animal. I am not speaking of its being hide bound in a feverish way.

1769. I understood you to say so?—No. If the animal has fever in itself how can it escape except through the mouth or the feet.

1770. When an animal has fever is it hide bound?—All inflammation would tend to make it so.

1771. (*Mr. Read.*) Do you consider that the London dairies are generally seats of disease?—I do; and I think that they have been seats of disease for a great many years past. If I were to give a hasty opinion I should certainly say that two out of three animals which have been in the cowsheds for many years past are not sound. I should say that certainly half of the whole number of animals are not sound, and are subject to disease, from the number of cows which we have seen in a diseased state.

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1772. Are the dairies now better or worse managed than they were some years ago?—I have no doubt that some are a great deal better managed, but as we pass a lot of grains they sometimes smell very bad; and they are very often kept for three weeks together. I think that that is calculated to engender diseases, or if not to engender them to make them worse from the way in which the animals are fed. Mr. James Rhodes thirty years ago had all his cow sheds cleared out by the general disease. We have had diseases many years ago quite as rampant and fatal, and a great deal more than what at the present time is called the Cattle Plague. I am anxious to state my opinion that I do not believe in this disease being imported. I would write more upon the subject, except that it might be looked upon as being suspicious, because I am extensively connected with the trade, and it might be supposed that I expressed my opinions for my own interest; but I am not particularly interested about a very extended business, for I have as much or more than I care for or wish.

1773. I gather from your evidence that you believe that this disease has been of spontaneous origin in the London dairies?—Yes; I have no other conclusion which I can come to; and not only in the London dairies, but I believe that it is spontaneous in many places. I believe in atmospheric influence, and that the disease, if not positively engendered by the London dairies, yet that fever of all kinds is bred and sustained in those localities which are badly drained and badly ventilated, such as we find our London dairies are. I do not wish to state that it has been engendered in the London dairies, but I believe that it is in the atmosphere, and that there is a kind of cholera in the air, which is a precursor of cholera in cities.

1774. You have said that we had worse diseases in the London dairies 30 years ago than we now have?—Yes; we had diseases then which swept certain dairies.

1775. Can you give us any evidence whatever to prove that those diseases spread into the country in the way that this Cattle Plague has done?—No; but history informs us of a general plague in cattle.

1776. Do you think that there any peculiar atmospheric influences in the year 1865 to induce the spontaneous origin of this disease?—I am not prepared to give an opinion upon that subject. I am satisfied that the disease which has been rife among cattle for many years past has been from baneful atmospheric influence, and I consider that it is this disease in a more aggravated form, from the extreme heat of the weather which we have had.

1777. Do you not know that in a very dry autumn we are always subject to mildew in our turnips and our grasses, and that it is nothing peculiar?—Yes; but we used not to be so; we were not subject to the potato disease; that was concurrent with the disease in cattle.

1778. That is not new this year, is it?—No; but it was concurrent with the general disease amongst cattle; it was just at the same time.

1779. Have you ever had any plague-stricken cattle of any foreign sort seized by the inspector?—Not one; I have sold lately 500 a week, and often 300 a week for years, and I never had one seized, and if we find out of the thousands of oxen which are exhibited in the London market not one which is diseased, is it not reasonable to conclude that it did not come from abroad? Look at the difficulties to which these oxen are exposed, which would be sure to illustrate disease if it was in their system.

1780. Have you ever had any plague-stricken English oxen or cows seized?—No. As regards the cows, I have declined to sell them, or to have any-

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thing to do with them, for months, and that may be the cause. At the commencement of this outbreak I declined it.

1781. Are not the the foreign stock now subject to the foot and mouth disease, and is it not very general?—They seldom are subject to it until they come here; they are subject to it after they come here.

1782. Are you not aware that in the month of June foot and mouth disease was of very rare occurrence?—Yes; and in nine years out of ten, even when the foot and mouth complaint has been general, just at the particular time when beasts are fed upon the grasses, the grasses have cured them. I think that I sold 6,000 beasts last year, from June to the end of November, and scarcely saw any with the foot and mouth complaint, at the fall of the year, when they were fed upon grasses; but in the spring of the year I have seen thousands in our London market with the foot and mouth complaint during the time when the easterly winds have prevailed, which has assisted me in my conclusion that it is from the atmospheric influence, because it is so much worse when the wind is one way.

1783. If the cattle were so particularly free from the foot and mouth disease in June and July, how does it come to pass that the disease is becoming so very virulent, now the weather is so much colder?—We have had easterly winds very generally prevailing, and that in my opinion is a great cause of it.

1784. Then why did you say that it was the extreme heat which aggravated the foot and mouth disease, so as to enlarge it into the Cattle Plague?—I look upon the foot and mouth complaint as the result of fever in the animal; it is only a struggle of nature to get rid of it in the extremities; it is a proof that the animal is getting well when it attacks the extremities, and it prevents its attacking any vital part.

1785. When the foot and mouth complaint is prevalent, and you drift cattle, do not they catch it; whereas when they are quiet upon the farm they seldom have it? Are they not almost invariably subject to it when they are drifted and congregated together?—Yes, and also when they are not drifted; and our cattle are so young, and are so much over fed, that they are much more subject to it than the foreign cattle; those coming from Oporto particularly are generally old cattle six or eight years old.

1786. You were in the Metropolitan Market yesterday; did you not see almost all the foreign stock suffering from the foot and mouth disease?—No, I did not; I saw some which were.

1787. A great portion of them?—No, certainly not; very few.

1788. Were not they particularly free from foot and mouth disease during the heat of the summer, much more than they are now?—Yes, I think so; I have seen many more instances lately than in the month of June.

1789. You have said that store stock are never sent to the Metropolitan Market?—Not to be sold for stores; but they are sometimes sold to keep, because they are worth more for that purpose than to kill.

1790. Are not hundreds of store stock sold in the Metropolitan Market and sent down to Norwich Hill?—I am speaking of the stock in England. My answer was given in connexion with store stock of England, which are never sent to the English markets, and a great many young beasts and calves are sent from Holland and other places which are worth more for stores than they are to kill.

1791. Are there not a great number of store cattle two and three years old, particularly from Holland, which come over to the Metropolitan Market, and are sold for store stock in the provinces?—Yes.

1792. Is not that the case even now, or has it not lately been so?—No; not lately. I do not know that they are sent on purpose for stores, but they are worth more for stores than to kill, and they are consequently bought for stores. I have had a large number every year of lean beasts sent to be sold to kill, but being worth much more money for stores they have been sold as stores instead of being killed.

1793. Were not there yesterday some foreign cattle in the market which were not worth 5*l.* each?—I did not see them. I had about 30 from Norway on Monday; they were worth very little money, but that was from their being so very diminutive; they were only about the size of calves; they were all sold to be killed.

1794. Were not they also very poor?—Not particularly so, but they were very diminutive, some of them not above the size of large dogs.

1795. Do you not know that the Metropolitan Market has been the great centre of this Cattle Plague?—I know that a great many cows have been sent there from the dairies; there has been no other place to which to send them to be killed; but I know that the disease is breaking out all round the country where no stock at all has been sent from the London market.

1796. I simply ask you whether you are not aware that the Metropolitan Market has been the great centre of the Cattle Plague; did we not first hear of it in the Metropolitan Market?—No; we heard of it in the dairies round London, and they sent some of those animals to the market.

1797. Was not the disease first heard of in London?—Yes.

1798. And did not the diseased cows go into your market?—Yes.

1799. And were not they sold in the market, and were not some of them taken to the provinces?—I do not know that any of them were taken to the provinces.

1800. You have said that if all the cattle which are sent to London should be slaughtered in London it would inflict an immense hardship upon the provinces?—Yes, very great indeed.

1801. I think you said that it was impossible to transport the dead meat so far as Leeds or Plymouth?—Sometimes it is impracticable and impossible from the heat of the weather, without spoiling it.

1802. During the autumn and winter months what particular hardship would it be?—It would entail a great deal more expense, and would increase the price of meat.

1803. How does it come to pass that you have so large a supply from Scotland; that is further than Leeds, is it not?—Yes.

1804. Does it come in good condition?—Exceedingly good in the winter time, but there are tremendous losses during the hot weather; there is a shocking destruction of food.

1805. You are very largely connected with cattle; do you consider this disease to be contagious?—Yes.

1806. Do you not know it to be infectious also?—Yes; from all that I have seen and heard, I firmly believe it to be so.

1807. Is it an old disease to you, or a new disease?—I have seen some of the external symptoms for years, but I have not dissected any animals, and therefore I am not able to speak upon that point.

1808. But you are so largely experienced in cattle, that you would know very well whether it was an old or a new disease to you; did you ever see it before?—I have seen the same symptoms in animals, but not to the same extent.

1809. Have you seen all the symptoms of the Cattle Plague in any one bullock before, in the whole course of your life?—I think not in this aggravated form, but I have seen that which has very nearly approached it, for many years.

1810. When you said that it was a good thing to stop the fairs, and not the markets, you meant that you would stop the markets for lean stock?—Yes; I should not think that any gentleman would send such beasts to the markets, because he would not find

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buyers, but there would be no harm in having the markets open for beasts intended to be killed immediately. I do not think it reasonable that anybody would send the animals for store stock, because he would not find any buyers.

1811. Do you not know that, whether reasonable or not, your market is still open, and that cattle are now sent to the provinces?—I do not know that store stock are sent to the provinces. I know that persons who are afraid to buy any home-bred animals in the country places come here and buy the foreign animals to slaughter; they are very often inspected half a dozen times over.

1812. And the English cattle would not be?—Yes, they would.

1813. Only once, would they?—Now I should think that they would be, because they are not allowed to come into the fairs unless they are sound. The Jews are the most particular people in the world about their meat, and they invariably buy the foreign stock, because the English stock have been far from healthy for many years past, and the Scotch too. I have seen some of the Scotch beasts affected with the foot and mouth complaint as bad or worse than any others; that may have been attributable to their having had to travel a great distance before they came to the rail. May I be allowed to make an observation as regards a proposition of which I have heard respecting a quarantine for the animals?

1814. (*Chairman.*) If you please?—It appears to me that it would be a very great hardship to keep those animals which are pronounced by eminent men to be sound until they become attacked by animals which are known to be unhealthy here, and that there would be a great waste; if you keep the animals a month there will be an immense loss.

1515. No quarantine is in existence now?—No, except in those cases where certain cargoes have come. I know a case where one animal was pronounced to be ill out of a cargo of I think 200 oxen. The rest had either to be killed, or be kept over for a month; the persons preferred killing all but ten; those ten belonged to Mr. Pool, and on this last Wednesday they have been passed, and pronounced to be perfectly sound; they have been in quarantine a month, and they have largely deteriorated in consequence.

1816. (*Mr. Read.*) If there were good slaughter-houses at the landing places would much loss follow to the importers from killing a few bullocks at the outports?—There would be immense confusion and immense loss to supply 3,000,000 of people in London.

1817. I am supposing that quarantine regulations are in force, and that one cargo is stopped; would it be any loss, if there were good slaughter-houses at the outports, to have those cattle killed there?—Yes; it would be a loss, because they would be thrown upon the market all at once, whether they were wanted or not, particularly if the weather was bad. But I think it very desirable to have good slaughter-houses, where the animals are obliged to be killed, because from the way in which they have been slaughtered heretofore, when I speak of a loss of 3*l.* to 4*l.* a head, that loss has been aggravated from the circumstances of there not being proper places to kill animals in.

1818. (*Dr. Playfair.*) Would a general quarantine of ten days for foreign cattle interfere much with the importation trade?—Yes.

1819. Would it stop it?—I think not entirely, but almost.

1820. (*Dr. Parkes.*) I think you said that cattle sent from the Metropolitan Market into the country for slaughter might be kept a week by the butchers or some days?—They would not be likely to keep them longer than a week; in eight cases out of ten they would kill them in the first three days, because it is an established fact that beasts after they have travelled, and have been taken away from their usual food, become deteriorated, and lose quality, and consequently it is the interest of the butcher to kill them as soon as possible.

1821. But there is no certainty that the slaughter would be immediate?—No; but there is a probability that the slaughter would be within three days.

1822. (*Chairman.*) Is there any other observation which you wish to make?—I may mention that I am very anxious to take some step as to alleviating the sufferers; and I am sure that the public are anxious to do so. If local subscriptions were established where bad cases have occurred, the people are so ready to help the sufferers that I am sure it would be done. Mrs. Laycock, a poor widow woman, lost 2,000*l.*, and I obtained 380*l.* in a few days; and if local charities of that kind were established I am sure that the public generally would respond to the appeal.

The witness withdrew.

A. Helps, Esq.

ARTHUR HELPS, Esq. examined.

1823. (*Chairman.*) You are Clerk to the Privy Council?—Yes.

1824. Will you be good enough to state to the Commission the measures which were taken by the Privy Council with regard to this outbreak?—The date of the first notice to me of the outbreak was the 10th of July. I immediately requested Professor Simonds to institute an inquiry into it. I received his report on the 14th of July. I was then directed by the Lords of the Council to ask the law officers to draw up an Order in Council to embrace the views of Professor Simonds. These were twofold; first, that all persons, cowkeepers and others, where there was disease, should give notice of it; and, secondly, that a power should be given to inspectors to examine. The Lords of the Council had several meetings; and, on the 24th of July, they issued their first order; that was the order which directed that all persons, within the city of London and the Metropolitan Police District, having any diseased animal should report the fact to the Clerk of the Privy Council; that he should appoint inspectors; and that these inspectors should have power to enter the premises and examine.

The disease increased, upon which, on the 11th of August, the Lords of the Council issued another order, still applying only to the Metropolitan district. In that order the chief additional provision was, that no animal labouring under the disorder should be removed from the premises on which the disorder had broken out, without the licence of an inspector.

On the 11th of August also an order was published which applied to the remaining parts of England and Wales, other than the Metropolitan Police district. In this order the local authority was defined; and the principal local authority in the country, were the justices acting in and for the petty sessional divisions of the county. They were allowed, in cases where the disease had appeared within their jurisdiction, to appoint an inspector. Then certain rules were given for the inspector, similar to those which had existed in the Metropolitan district, namely, that no person should remove, without the licence of the said inspector, any animal labouring under the disease. There were, however, in this order important provisions made with respect to the burial of the infected animal and the disinfection of the premises.

On the 18th of August the provisions which had been made for England and Wales, were extended to Scotland.

On the 25th of August there was an order passed, affecting Ireland, namely, that no cattle (and it is stated that "the word cattle shall be interpreted to "mean any cow, heifer, bull, bullock, ox, or calf") were to be removed "from any port or place within "that part of the United Kingdom called Great "Britain, to any port or place within that part of "the United Kingdom called Ireland."

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On the 26th of August another order was passed, of which the important part was this, that the justices should not only have power to appoint an inspector when the disease was absolutely in the district, but when they should "have reason to apprehend the approach "of the said disease to the district." There was also in this order a power given to the inspector "to seize "and slaughter, or cause to be slaughtered, any "animal labouring under such disease.

Orders were then passed, on the 7th and 13th of September, relating to the importation of hides and skins into Ireland.

On the 22d of September an order was passed, relating to Great Britain, consolidating all the previous orders, modifying them in some small matters, and adding two important provisions, one affecting the Metropolitan Cattle Market, and the other giving the local authority the power to prevent the animals defined, or some specified description thereof, from entering a market or a fair within the jurisdiction of that local authority.

The disease was then supposed to extend to sheep and lambs, upon which an order was issued on the 29th of September prohibiting sheep or lambs from being imported into Ireland from Great Britain.

There was then an order passed for the island and barony of Lewis in the county of Ross, prohibiting cattle of any kind from coming into that island from any part of Great Britain. Those are all the orders which have been issued. There have been certain other documents published, in some measure under the authority of the Council; for instance, papers containing suggestions on the part of Professor Simonds, and a memorandum on the principles and practice of disinfection, by Dr. Thudichum.

1825. In the last consolidated order was not there a provision that no cattle should come to the Metropolitan Market except for the purposes of slaughter?—Yes. This provision was made on account of the very general complaint in the country districts that the disease had come to them from the Metropolitan Market; and it was supposed that if cattle were brought to the Metropolitan Market solely for the purpose of being immediately slaughtered, and if those cattle were marked, it might greatly tend to prevent the spreading of the disease from the Metropolitan Market to the country districts.

1826. Does the same provision refer to the country fairs and markets?—No.

1827. Has there been any similar provision on the subject of country fairs and markets?—No.

1828. Is it in the power of the magistrates in petty sessions now to stop a fair or market?—Yes. Under the provision affecting the Metropolitan Market, the cattle might come to the market, but were to be sold there only for immediate slaughter. The other provision as regards the prevention of a market or fair, enabled the local authority to forbid specified stock from coming into it.

1829. Will you describe that part of the order which relates to the country?—Whenever any local authority, the local authority being herein-before defined, declares by notice, published in a newspaper, that it is expedient that animals, or some specified description thereof, shall be excluded from any market or fair, it is not lawful for any person to bring or send into that market any such animals so described.

What I have mentioned are all the public papers which have been issued by the Council.

1830. Have you any memoranda or other papers which you think it important for the Commissioners to have before them?—I think it is desirable that the Commissioners should know what has been done with regard to burial in the metropolitan district, the arrangements for which were completed on Wednesday last.

1831. Will you state generally the effect of those papers, and then put them in?—There are to be three modes of burying in the metropolitan district. "No. 1. "Where there is a suitable place, on or immediately "adjoining the premises where the animal has died or "has been slaughtered, the carcase may be buried there "according to the provision No. 17 of the order of the "Lords of the Council of the 22d of September, viz., "with its skin on, and with a sufficient quantity of "quick lime or other disinfectant, the carcase being "covered with at least five feet of earth."

The second method is, "where it is not desirable to "bury an animal on or immediately adjoining the "premises," whether on account of the injury to the owner himself, or to the public generally, "the "inspector is to have the carcase disinfected, and "afterwards it is to be disposed of (with the con-"sent of the owner) in such manner as the inspector "may direct." It may be matter of private negotiation between the inspector and sundry other persons, as to how the carcase, after being disinfected, should be disposed of. An individual can take this carcase, for such a purpose, or for another purpose, it being thoroughly disinfected. The inspector, with the consent of the owner, can deal with it in any way that he pleases. "No. 3. Where the owner cannot pro-"perly bury the animal on or near his premises, and "where he will not consent to the disposal of the "carcase in such a manner as the inspector may "direct, the leaving of the carcase unburied will "give rise to a nuisance, and the inspector of cattle "will be instructed to lose no time in giving notice "to the Inspector of Nuisances for the district, or "to the police, in order that immediate action may be "taken under the Nuisances Removal Act, with the "supervision of the local authorities." Those are the three modes of disposing of the carcase which the Lords of the Council have ordered to be adopted for the Metropolitan Police District, their Lordships agreeing to supply disinfectants to the inspectors for use within the limit of that district.

The witness delivered in the following papers:

"Sir, "Whitehall, 10th October 1865.

"I am directed by Secretary Sir George Grey to acknowledge the receipt of your letter of the 5th instant, transmitting a copy of a correspondence between the Lords of the Council and the Commissioners of Sewers, upon which you request his opinion and advice.

"The Commissioners of Sewers in their several resolutions have expressed their opinion—

"That it is impossible in the city of London and in the metropolis generally to bury the animals affected with the Cattle Plague on or near the premises where they die or have been slaughtered;

"That the practice of disposing of such animals in the slaughter-houses and knackers'-yards of the metropolis should be discontinued, as being likely to propagate the disorder; and,

"That such practice is also likely to be dangerous to the public health, because the slaughter-houses and knackers' yards are for the most part situated in crowded localities and in common thoroughfares.

"The Commissioners therefore recommend:

"That places should be set apart where all such animals should be disinfected and disposed of, and that such places should be provided by Government.

"I am directed by Sir George Grey to acquaint you, for the information of the Lords of the Council, that he concurs in the opinion which you express, that if it be necessary to provide such places as have been suggested by the Commissioners, the matter is one which it is not within the province of Government to undertake, and which should be left to the local authorities.

"It certainly might be dangerous to bury carcases of animals affected with the Cattle Plague in thickly populated districts; but Sir George Grey has received no representation that the cattle inspectors have exercised improperly the power given to them by the 10th section of the order of the Lords of the Council of the 22d of September to cause such carcases to be buried in convenient places.

"With reference to the authority to direct the disposal of the carcases, with the consent of the owner, otherwise than by burial, which is given to the inspector by the 17th section of the order, Sir George Grey has recently sent to the Lords of the Council a report furnished at his request by Mr. Holland, Inspector of Burials, showing that means exist by which carcases of diseased animals can be completely disinfected.

"Other efficient means of effecting the same purpose may be known to the Lords of the Council, and if information on this subject is given to the public, and the inspectors of cattle are authorized, when necessary, to supply the means of thoroughly disinfecting the carcases at the place of death, there seems no doubt that they may be properly and safely disposed of without providing special places for the purpose.

"Should the owner of a carcase of a diseased animal refuse to obey the direction of the cattle inspector as to its disposal, Sir George Grey would suggest that application should be made to the inspector of nuisances of the district, or to the police, in order that the provisions of the Nuisances Removal Acts may be put into force under the supervision of the local authorities.

"I am, Sir,
"Your obedient servant,
"(Signed) T. G. BARING.

"The Clerk of the Council,
&c. &c."

"Privy Council Office,
"Sir, Whitehall, 11th October, 1865.

"Referring to the correspondence which has passed between this office and the Commissioners of Sewers with respect to the disposal of animals that have died of the Cattle Plague, or have been slaughtered in consequence thereof, I am directed by the Lords of the Council to write to you as follows, for the information of the Commissioners:

"Their Lordships have consulted Secretary Sir George Grey upon the subject, and have received a letter written by his direction, a copy of which I herewith enclose.

"In the Metropolitan Police District the inspectors appointed by the Clerk of the Council have been instructed not to order the burial of any animal (under the 10th section of the order of the Lords of the Council of the 22d September 1865), in any place where to do so would be likely to be injurious to the public health.

"In that district, therefore, subject to the foregoing instruction, the disposal of all animals that have died of the Cattle Plague or have been slaughtered in consequence thereof will take place according to one or other of the three following methods:—

"No. 1. Where there is a suitable place on or immediately adjoining the premises where the animal has died or has been slaughtered, the carcase may be buried there according to the provision No. 17. of the order of the Lords of the Council of the 22d September, viz., with its skin on, and with a sufficient quantity of quick-lime or other disinfectant, the carcase being covered with at least five feet of earth.

"No. 2. Where it is not desirable to bury an animal on or immediately adjoining the premises, the inspector is to have the carcase disinfected, and afterwards it is to be disposed of (with the consent of the owner) in such manner as the inspector may direct.

"No. 3. Where the owner cannot properly bury the animal on or near his premises, and where he will not consent to the disposal of the carcase in such a manner as the inspector may direct, the leaving of the carcase unburied will give rise to a nuisance, and the inspector of cattle will be instructed to lose no time in giving notice to the inspector of nuisances for the district, or to the police, in order that immediate action may be taken under the Nuisances Removal Act, with the supervision of the local authorities.

"The Lords of the Council having every wish to facilitate the disinfecting and disposing of the carcases of diseased animals, have ordered that disinfectants shall be supplied to the inspectors of the Metropolitan Police District for use within the limits of that district.

"I am, &c.
"(Signed) ARTHUR HELPS.

"J. Daw, Esqre."

1832. Can you give the Commission any idea as to the manner in which these precautionary measures of the Privy Council have worked throughout the country?—I believe they have worked well. There have been very few complaints, comparatively speaking, of the way in which the various provisions contained in these orders have been brought into operation. The letters addressed to the Privy Council have contained suggestions rather than complaints. After the various Orders in Council had been published, there were generally requests that these orders should be made more stringent, and be carried further. I think that the time when most complaint of any sort was made was during the interval which elapsed after the publication of the Order in Council which gave the local authority power to appoint inspectors, only in those districts where there was already disease; that was remedied in about a fortnight, by giving the local authority power to appoint inspectors where there was an apprehension of the disease. Perhaps your Lordship would like me to mention what has been the chief difficulty which has been brought forward after the publication of the last consolidated order in reference to fairs and markets. There have been many magistrates attending at the Home Office and at the Privy Council Office, within the course of this week; and what they have said is this: "It is no good our preventing a fair in this Petty "Sessional district if there is to be a fair held "nearly at the same time in a district adjacent to it; "if the magistrates of that adjacent district will not "act under this order, the result, desired by our-"selves and by the Government, may fail to be "obtained." Several of them saw me at the Council Office, and I afterwards put them in communication with Sir George Grey and Mr. Baring. The result was, that Sir George Grey issued yesterday a letter, which I will put in, in which he calls the attention of the justices at the approaching quarter sessions to the state of things, with regard to forbidding fairs and markets; and he suggests that it is desirable that the various local authorities should as far as possible act in concert, with a view to the effectual exercise of this power. I may mention that the great difficulty which has arisen within the first week or two after the publication of the order with respect to fairs and markets has been this, that sufficient notice could not be given to the dealers, and consequently the herds had come up. It requires a few weeks before the order can be known; people bring up their cattle, and must contrive to sell them; and consequently the advantage of forbidding the market has been in a great degree counteracted.

1833. But when once known you have no reason to believe that there would be actual opposition to it?—I think not.

The witness delivered in the following letter:

"Home Office, Whitehall,
"Sir, "12th October 1865.

"I am directed by Secretary Sir George Grey to inform you, that it has occurred to him that it may be desirable that the attention of the justices of the county of should be directed at the approaching quarter sessions to the order of the Lords of the Privy Council of the 22d ultimo with reference to the Cattle Plague.

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"Under section 19. of that order the justices acting in and for any petty sessional division (whether in ordinary or special sessions) can, by notice, make it unlawful for persons to bring or send, during a specified time, animals as defined in the order or any specified description thereof to any market or fair in their division.

"This power has already been exercised in several instances; but it has been represented to Sir George Grey that the advantage to be derived from it will be materially impaired if, while the power is exercised with reference to some markets or fairs, no action is taken with respect to others in the neighbourhood.

"It is clearly desirable that various local authorities should, as far as possible, act in concert, with a view to the effectual exercise of this power; and Sir George Grey will be happy to be the means of communicating, if necessary, between the justices of the county of and other local authorities, as defined in the order, with respect to any proceedings which the justices may think it expedient to take on this subject.

"As it is obviously important that ample information of any order, made for the purpose of preventing animals being sent to any market or fair, should be given to the public, not only in the immediate neighbourhood of the market or fair, but also in the district from which the market or fair is supplied, I am to suggest that means should be taken for the widest possible circulation of such information, by means of the chief constables of the county or counties concerned, or otherwise as the justices may think expedient.

"I have," &c.

1834. Has this order been generally carried out?—No; it having been so short a time in operation, namely, since the 22d of September; but already there have been a good many fairs I believe forbidden, namely, in Buckinghamshire and in Oxfordshire. It is beginning to be acted upon with considerable vigour.

1835. With regard to that part of the order which relates to the Metropolitan Market, will you state how that has worked?—I am afraid that I cannot give much minute information upon that point. I believe that Mr. Tegg has stated to the Commission that very few diseased beasts have been brought in since that order.

1836. Do you believe it has stopped the animals coming to market to be sold as store animals?—I should think that it had, to a considerable extent, because, though there may be many instances in which the animals have gone from the Metropolitan Market to distant places, yet I think that it has been to contractors, to Aldershot, and to Plymouth. I do not think that these have been store cattle.

1837. What becomes of animals which are sent to the market, and are not sold?—Upon that point I think that the chairman of the markets would be able to give you better information. I am afraid that they have gone back to the owners in many instances.

1838. Have you reason to be satisfied with the manner in which the inspection of the cow sheds and the inspection of the London district has been carried on?—Yes; it was an extremely difficult matter. Very frequently there was considerable resistance to the inspector; he was naturally looked upon as an enemy. Very few complaints have been made to me of the conduct of the inspectors in my district.

1839. Do you believe that the staff of inspectors has been sufficient?—Perhaps there might have been more appointed with advantage, but in every instance where persons in the locality have represented to me that there has been a deficiency I have caused it to be inquired into, and have had the number of inspectors added to.

1840. Has there not been considerable difficulty in carrying out the orders of the Privy Council with regard to the burying of the dead bodies, the burying of the hides, and so on?—Considerable difficulty; in the first place, in London they attempted to bury in a yard in or near the man's premises, and very frequently it interfered with the sewers or with some underground work, and it has been almost physically impossible to carry out the burying in or near the premises. The inspectors have done the best they could in getting the carcases buried anywhere. For some time large numbers were sent to the Isle of Dogs; it was supposed that they would do for manure, but the manure was, I believe, refused by the farmers, and therefore the Isle of Dogs people would not take any more of the carcases. There has been an extreme difficulty, from the nature of things, in getting the diseased animals buried in the metropolitan police district.

1841. Will you state the organization of the inspection in the metropolis?—The owner of cattle having the disease reports the fact to the Council Office; that is, without delay, communicated to the veterinary department, and immediate inspection takes place.

1842. There is a head inspector belonging to the veterinary department?—Yes, Professor Simonds, who has often gone down upon special occasions into the country when there has been anything remarkable which has occurred there. For instance, he went, by my orders, to examine at once into the rumoured outbreak of disease amongst the sheep.

1843. How many inspectors are there under the immediate control of the head inspector?—I think that there are from 20 to 24 at present.

1844. Are there any local authorities who have power to inspect and who assist the inspectors appointed by the Privy Council Office?—No; there are inspectors for the Customs, as your lordship knows.

1845. There are no parish inspectors?—There are medical officers of health and the inspectors of nuisances, who have undertaken the inspection of cowsheds as a part of their general sanitary business.

1846. Can you give the Commission any idea of the extent of the disease now in England?—I am sorry to say that the veterinary department have not yet mastered that part of the subject, they have not yet got such returns as can be shown, but I am informed that they will have them in a day or two.

1847. Can you give us a list of the counties in which there has been an outbreak of the disease?—I think that the veterinary department would know that pretty accurately; but I would rather not, without consulting them, attempt to put in a statement which would probably be imperfect.

1848. (*Dr. Parkes.*) Referring to the order in Council that beasts should be sent to the Metropolitan Market for immediate slaughter, supposing that a butcher bought beasts there, and took them down into the county of Kent, for three or four days or a week, and grazed them during that time, as he would probably do, would that be opposed to the spirit of the order?—Yes; I think it would.

1849. By immediate slaughter is meant in all probability slaughter within 24 hours?—I should hardly say that. I knew (I do not know whether it was generally known) that it was not the the case in London, but that beasts were found in butchers' places for three or four days.

1850. If they were taken down into the country and grazed, that you think would be contrary to the spirit of the order?—I think so.

1851. (*Mr. Read.*) Was not the first order in Council wholly inoperative as regard the Metropolitan dairies; did not the cowkeepers first of all get rid of their cows, and then tell the inspector that the disease was upon their premises?—In a great many instances they did.

1852. There is no superintendent of inspectors in the provinces, I suppose; no head inspector, for instance, for a county?—No.

1853. Do you think such a thing desirable?—I do.

1854. May I ask you who Dr. Thudichum is?—

he is one of the medical men employed by the medical department of the Privy Council.

1855. He says that cattle can "accidentally carry "the poison from other animals in a dormant state "upon some part of their surface, their hair, and "particularly their feet, and may therefore infect "other cattle without becoming themselves subjects "of the plague." Have you any idea from what source he obtained that information?—No.

1856. (*Professor Spooner.*) Would it not be advisable for the Lords of the Council to issue some special order with regard to the means of disinfection?—There is a letter which I will send to the Commission to-morrow which is to be issued in the metropolitan police district by the veterinary department.

1857. (*Dr. Playfair.*) Is it Dr. Holland's letter?—No; I think that they have the letter in question in preparation at this minute up stairs.

1858. (*Viscount Cranborne.*) Can you tell the Commission what orders in Council have been issued in Ireland?—None, I believe.

1859. Have no precautions whatever been taken there on the part of the Government against the disease? Not that I am aware of.

1860. No inspectors have been appointed?—No inspectors have been appointed.

1861. Not even at the ports?—I think that there has been one for Dublin.

1862. And only for Dublin?—That is all that I have heard of; but this is a matter which only the Irish Government could inform you upon, and I cannot say for certain, how it is.

1863. (*Chairman.*) Have you anything else to which you wish to draw the attention of the Commission?—I would like to say something, but the Commission might think that it was rather out of my province. I am speaking now quite as a private individual. I think that it is very desirable to give a great deal of the working of these Orders of the Lords of the Council to the local authorities. You will say, perhaps, that at the present moment they have been rather slow. They always are so at first in these matters, but I think that it is very important in this case to give much power to the local authority, on this account. You have an evil of the greatest magnitude, embracing innumerable details which cannot adequately be met by the wisest and most stringent Orders in Council which can be imagined, and to meet which I think you must rely upon the people,—I mean the magistrates, the farmers, the cattle dealers, the herdsmen, if you are successfully to attack it. They must act thoroughly and heartily with you. I will take one instance, namely, the disinfection of manure. Do what we will, how can any central authority manage with respect to such a thing as that? But if there is great discussion in a county, the magistrates are very much interested in the matter, and not merely that, but there are county meetings, and the whole question is largely discussed amongst the farmers, and private individuals bestir themselves in every way. I look upon those discussions as of the highest importance, as regards local action. I have had several magistrates with me this week, and one has said to me, "I was on horseback "from morning to night attending to the fair and "endeavouring to prevent the herds of cattle coming "in." I thought that if it was a Government order that he was carrying out, and if he had had nothing to do with it himself, he would not have been so energetic as he was. I feel that the very magnitude of the evil, as it enters into thousands of details, must be met by very general co-operation; and I do not believe that you will ever have very general co-operation unless you give power to the local authority. I will explain my views still further: I may say that I have been thinking of this subject for many months, and I have thought, what have foreign governments done? After all, you cannot say that their efforts have been wonderfully successful, except in Prussia. Prussia has apparently kept the disease out, but where it has got a footing similar to what it has got in our own country, it has been only isolation and slaughter that have been adopted, and consequently, though this disease has been existing for years in certain foreign countries, they have not got rid of it. Now, I consider that the plague having come amongst us, the people, in their quiet way, by local self-government, will adopt wiser precautions, and more will be done than has been done among any other people. From what I have had to do with the local authorities, it has really given me more confidence in the people generally, and made me extremely averse to centralization. I think that the Government has acted very judiciously in putting forth all manner of information. I strongly believe that the first paper put forth by Professor Simonds did an immense deal of good, and one thing which he advised, namely, "when you buy any stock keep it in quarantine," has been largely acted upon, and has done a great deal of good. I believe that this Commission or the Government can recommend things which would be followed out very patiently and carefully if you would commit the execution of these measures to the local authority. In this particular case the disease has not spread with extraordinary rapidity; we seem to have some little time before us; it has only touched upon a few places in Great Britain, comparatively speaking, and therefore if you could succeed in making all the people act with you, there seems to be sufficient time for doing so, and I think that it is our best chance. I know how much there is to be said on the other side, and I simply venture to make the suggestion that you should not neglect the local authority, as, after all, you must depend greatly upon it.

1864. It would be necessary for the Government to originate a scheme, and for local authorities to carry it out?—Certainly.

1865. (*Dr. Playfair.*) You are probably aware that in Poland, where the restrictive measures have been so successful, the Government threw the execution of this duty upon the local authorities, and that the Government take very little action, but depend upon the local authorities for stamping out the murrain, and for carrying out the measures?—I am not aware of that. I have read the despatch, but that point did not arrest my attention.

1866. (*Viscount Cranborne.*) Will you state more in detail to what extent you would restrict the action of the central Government in interfering with the local authorities? Would you merely give to the local authorities the execution of the policy devised by the central Government, or would you leave to the local authorities the discretion whether they would adopt that policy or not; for instance, with respect to the matter of closing fairs and markets?—I feel that that is a very difficult question to answer, but I will boldly say that I would leave to them even the adoption of the policy when you have indicated it. When the policy is well indicated and well talked of right round the country, I believe that those local authorities will work as well as the Government would in furthering the policy.

1867. With reference to stopping fairs and markets, does it not occur to you that the power of stopping them, if you committed it to the local authorities, would reside in one set of persons, and that the interest in stopping them would press upon another set of people, that is o say, that the contagion is not generally most spread about by the fair and market in the place where the fair and market is held, but in the places from and to which cattle are sent from that fair and market, which may be at a distance?—I feel that difficulty, but at the same time I should think that the general good feeling which mostly guides mankind would conquer it; perhaps you may say I am too hopeful about the matter; but I think that there is patriotism enough in the country at large to overcome petty local interests. I think that you will find that in the next few weeks fairs and markets will be very considerably stopped.

1868. It is said that the Liverpool market is one of

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the great dangers at the present moment. It is obviously not the local authorities who suffer most, but the agricultural districts in Lancashire?—Do you think that there is sufficient public spirit in Liverpool to meet that?—Yes.

1869. Do you not think that the cattle will die before the public spirit has got to work?—There is that danger. That is the other side of the question. But, I repeat, that I would trust greatly to well-guided local effort to check the disorder; and I believe it will exert itself in time to do so.

1870. Would you not extend this local authority somewhat more widely than it has been extended hitherto, and at least vest the powers in the quarter sessions?—I speak with great deference about that, for I know that one great legal authority thinks the contrary. The petty sessional division was not taken until after a good deal of thought upon that point, but I confess that the other view of the question had occurred to me.

1871. Such a question as stopping the importation from the Metropolitan Cattle Market you would not leave to the local authorities, but would leave to central interference?—Certainly.

1872. And all questions of importation from abroad you would regard as questions of central interference?—Certainly; these are imperial questions.

1873. (*Mr. Lowe.*) Do you think that the local authorities are already possessed of sufficient power to deal with this question? You say that they are very good men, and wish to do it; but do you think that they have the power, or do they require fresh power in that way?—I will take a particular case. I will take the case of fairs and markets. I think that the local authority may not have sufficient power under section 19 of the order of the 22d of September. It is very probable that when this Commission looks into the matter, it may find certain words to add to the section in the Order of the Lords of the Council upon fairs and markets, which would give the local authority fuller powers; but, it being granted that it will be improved, if it is improveable, I believe that it will be more prudent to intrust action to the local authority than to have some central authority regulating it all.

1874. I do not exactly understand what, in your view, this Commission is to do?—In that very instance, about fairs and markets, you might say that you could see very great improvement that might be made to section 19 of the Order as to what the local authority or the Government might do in forbidding fairs; but my point is this, whether you would not gain more in the long run from putting that power into the hands of the local authority than into those of the Government?

1875. Your impression is, that if any fresh legislation is required, it should be in the direction of putting power into the hands of the local authorities rather than of the Government?—Yes.

1876. (*Mr. Read.*) If there is one good line of action would it not be more uniform through the interference of the Government?—I think that it would.

1877. We will take a special case; for instance, Norwich Hill, which is a great weekly market under the jurisdiction of the mayor and corporation of the city of Norwich; it might be quite possible that all the county magistrates should wish the closing of every fair and market in the county, but if the Mayor and Corporation did not think so, they could keep the Norwich market open?—No; but I think that there might be a combined action suggested by the Commission which would preserve what I have ventured to put before you, namely, the immense advantage of interesting all these people locally, and yet advising and even prescribing a clear course of action for the country generally.

1878. Do you not find that local authorities take very different views of a case; for instance, the Norwich Corporation might say, "We shall lose all our tolls for two or three months;" and they are the persons who would be benefited by keeping the market open, whereas the county would be the sufferers?—If it were found to be the case that these small local interests prevented judicious action, I should immediately admit that my view breaks down, and that you must have the strongest central authority.

1879. (*Viscount Cranborne.*) But before that could be ascertained, the cattle would be dead?—I will ask whether the disease has progressed at that rate at present as to make it imperative that the central Government should act alone, without reference to local authority? I do not think that it has.

The witness withdrew.

Mr. C. Hicks.

Mr. CHARLES HICKS examined.

1880. (*Chairman.*) I believe that you are Chairman of the Foreign Cattle Importation Association?—I am.

1881. Are you in any other way engaged in the cattle trade?—I am a salesman of cattle.

1882. Has there been a large number of foreign cattle imported into the country in the last few years?—Yes, exceedingly large; this year more than ever before.

1883. Can you give to the Commission any return of the number of foreign cattle imported into the country?—I cannot say for certain, but during the last three months I should say that there have been at the rate of about 3,000 or 4,000 head of cattle per week, and perhaps 13,000 to 14,000 sheep; in the spring the number is not so large; perhaps about 1,500 head of cattle per week and 6,000 or 7,000 sheep.

1884. Has the number increased lately?—Yes; this year we have had more than ever before.

1885. How do you account for that?—The fact is that the London trade has become more spread through all parts of the continent; we have received this last year or two cattle from countries which formerly sent none, that is to say, from Sweden Prussia, and France, and I believe also from Hungary, and from Galicia.

1886. Can you state to the Commission the different countries from which you import cattle?—I receive cattle from Sweden, Denmark, Germany, Holland, and France.

1887. Do you receive any Hungarian or Russian cattle?—Very seldom; in fact we cannot say exactly where they come from, because these cattle are generally consigned to London by dealers in Hamburg, or Magdeburg, or Berlin, and therefore we only receive them from the port of embarkation; but still there is no doubt that cattle are sent to this country from Bohemia, Hungary, Gallicia, and Prussia.

1888. Can you state generally how the trade is conducted?—That is very various; the cattle coming from Hungary, Galicia, the Rhine, and different parts of Prussia, and Mecklenburg, are generally speaking sold in the markets of Hamburg and Berlin, and are then consigned to London salesmen by dealers; but from Sweden, Holland, and partly from France, and from Schleswig-Holstein they are consigned by the owners.

1889. In the first places which you have mentioned it is a speculation of foreign cattle dealers?—Quite so.

1890. Though you do not yourself import many cattle from Hungary, you can probably tell the Commission what number of cattle generally come from Hungary to this country?—I cannot.

1891. You cannot state the route by which they come to this country?—I cannot.

1892. With regard to the cattle as to which you

can give information to the Commission, will you state the regulations which exist in the countries from which they come with respect to their exportation from those countries?—In many instances the cattle are brought to the place of shipment, and are there examined by a veterinary surgeon; that is the case at Tonning, from whence there are now imported weekly something like 2,000 head of cattle; the same thing takes place in Holland, and I think that that is all. I think that from other parts the exportation is free; but at the same time, since the plague has shown itself in this country and also in other parts, the exporters of cattle have taken the precaution to have them examined previously to shipment, and they send a bill of health along with the cattle to show that they are shipped in good faith.

1893. Are there Government inspectors at the ports from which the cattle come?—No, I think not; in some parts of Holland there are. Veterinary inspectors are appointed in Holland, but I think not elsewhere.

1894. Can you furnish the Commission with a return of the number of cattle coming from each of those countries which you have mentioned?—Yes. I think that I can do so very nearly, but not exactly.

1895. Will you have the goodness to do so?—I will.

1896. Can you tell the Commission in what countries at the present moment the Rinderpest exists?—All that we know is, that about the middle of July or August certain number of cattle, 23, were sent from the Metropolitan Market back to Scheidam, and that those cattle took that complaint along with them; otherwise, wherever I received my cattle from, that is to say, Sweden, Denmark, Schleswig-Holstein, and France, they had not the complaint.

1897. Is there any Cattle Plague in Hungary at the present time?—I have only read of it in the papers; I have no knowledge upon the point.

1898. Have you observed this disease among the foreign cattle which have come to the English market?—Certainly not; but perhaps I may add, that I have seen cattle which have come from abroad which have stood in the market for sale, and have been, as we say, turned out unsold, they have taken the complaint after being exposed for sale; but I have not seen, with the exception of one or two, which have come from Holland, since those cattle were sent back, a single case of an animal from the countries which I have spoken of which has brought the complaint here.

1899. Then it is not your opinion that the origin of this disease in England is to be attributed to the foreign cattle?—I have made every inquiry, and I have not found a single proof.

1900. With regard to the foreign cattle which you import in this country, do they ordinarily come fit for the butcher, or do they come to be sold for grazing purposes?—They come here for the purpose of being killed, but their condition depends exceedingly upon the season. This year our importations from Schleswig-Holstein have been in a very poor condition, and but for the complaint which is now raging many of those cattle would have been sold for grazing; but of course as the complaint has made that business so dangerous we have had to dispose of them for killing at very small prices.

1901. What is the proportion in ordinary times of the cattle which come for the butcher and those which come for grazing?—From Holland they send occasionally a large quantity of small cattle, what they call "sterks," about 6, 8, or 10 months old, but otherwise the cattle coming from abroad came wholly for the purpose of being killed; it is only in bad seasons that we receive cattle which are not good enough for killing.

1902. You told us just now your opinion with regard to the inspection in foreign ports of the cattle which are sent to England; how is the inspection at our home ports carried out?—I think very fairly; but still I think that in justice to our trade there should not be so much power put into the hands of one man. I had for example a small cargo of cattle which was stopped at the port of Thames Haven about three week since; the surgeon there thought that they had the complaint, and there is no doubt that he was exceedingly mistaken.

1903. (*Mr. Read.*) What do you mean by "the complaint?"—This plague. Thereupon these cattle were put into quarantine and stopped there for ten days, and after that they were released.

1904. (*Chairman.*) What was the quarantine?—They were put upon a piece of land of about three or four acres; they were railed round, and a custom house officer was put in charge, and they remained there for ten days, and were then released. I think that in fairness to the consignors of cattle from abroad, where there is a suspicion that cattle have this or that complaint, at least two or three experienced men should give their opinion.

1905. To whom did this land upon which those cattle were placed belong?—I believe that it belonged to the Tilbury and Southend Railway Company.

1906. Has it often before occurred that animals coming from abroad have been put into quarantine such as you have described?—It has happened about three times of late. It happened with regard to a cargo of cattle from Holland by the "Maas," about a month since. There were three cows on board, which were suspected, and I believe that they had the complaint, and upon that account they were all stopped, and most of them were killed and sold. Then there was a cargo of cattle stopped at Harwich about a fortnight since.

1907. At what port were the cows which you have mentioned killed?—At Blackwall, and there was also a cargo stopped at Harwich, which animals were likewise killed, but a proceeding of that kind entails a very heavy loss.

1908. What became of the rest of the cargo?—They were all killed and sold.

1909. They were all put into quarantine?—Yes.

1910. Were they condemned by the Government inspector?—No; they were not condemned, but they were put into quarantine as a measure of precaution. If they had shown symptoms of complaint during that time they would have been condemned, but many of them were slaughtered by order of the owners, and others of them went through the time and were released.

1911. What are the ports in England where the largest number of foreign cattle are disembarked?—London and Hull are the two largest.

1912. Is there much preference shown to the port to which these cattle are brought from abroad?—London is by far the most important one, because in London there is always a sale. It there depends only upon the price; we only have to take a certain amount less, and we can always sell; whereas in Hull or in other places the demand is only small, and beyond a certain number of cattle cannot be sold.

1913. It sometimes happens that cattle coming to England are sent to Hull in preference to another port?—Yes; because occasionally during stormy weather the port of Hull is reached so much earlier.

1914. The inspection of cattle is not more severe at Hull than in London?—I think not.

1915. You have observed the Order in Council which restricts the animals sent to the London market to those sent for the purposes of slaughter?—Yes.

1916. Has that had any effect upon the foreign trade?—I have observed none, and I do not see how it should, for since the outbreak of this complaint we have had no buyers of cattle for stock; that trade has entirely ceased of itself.

1917. Do you believe that that Order in Council is effectually carried out?—I believe so.

1918. So that really no animals leave the market for the purposes of grazing?—That I can hardly say; but as soon as animals are sold for slaughter it is the

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custom of the trade to cut the hair off the tails, and I believe that now all cattle leaving the market have the hair cut off before they go, therefore they go away with a mark which shows that they have come out of the Metropolitan Market; consequently any person who would buy an animal of that description would buy it with his eyes open, knowing that it had come from a place where the plague existed.

1919. Then it is not your opinion that if this order was strictly carried out it would interfere with the foreign trade in cattle?—I cannot say that; I think that it would do our trade some harm, but of course in a matter of public importance private interests must give way.

1920. Then I gather from what you say that you think that this Order in Council is important for the purpose of checking the disease?—Yes, I think that it is a very good order.

1921. Have you any connexion with the home trade?—No.

1922. (*Mr. Lowe.*) What suggestion would you make with regard to the quarantine?—I think that at the present time the cattle are brought to London and unshipped at wharves where there is very little accommodation for the trade. I think that if the system of quarantine is one which is to be adopted, the cattle should be unshipped at a place or places where there is ample accommodation in case they are suspected of being touched by any contagious complaint, where they could be sold and properly slaughtered, and by these means realize about half their value. At the present time cattle come to London 400 or 500 in one vessel; they are brought on to a wharf where there is no room, and are there killed; they are slaughtered in a manner which very much deteriorates the value of the meat, and a transaction of that kind upon a cargo of 300 beasts would no doubt lose the consignor something like 500*l.*

1923. Do you know whether there is any great movement of cattle in this country from one part to another, and what causes occasion it?—I cannot state.

1924. Do you know at what season of the year lean cattle are sent down?—In Norfolk of course there is a very large demand for lean cattle from the end of August till the end of the year.

1925. And in other counties?—In Lincolnshire, Leicestershire, and Warwickshire, the demand would be in the month of April. In one part of the country they are bought for grazing, and in the other part of the country they are bought for fattening; in Norfolk they are bought for fattening; in Leicestershire and the other counties they are bought for grazing.

1926. Is there any remedy which you can suggest to us?—No, I know of none. The only point which I see which can be carried out is to have a complete separation of fat stock markets and poor stock markets.

1927. When you had separated them, what would you do?—I would provide that the cattle intended for grazing or feeding should not come into contact with cattle which had come for slaughtering, because it generally appears with all these complaints that fat cattle are more subject to them than lean ones.

1928. What do you mean by "store" with regard to cattle?—Cattle intended for further grazing or feeding.

1929. As opposed to fattening?—Yes.

1930. Not fat cattle, and not cattle intended to be slaughtered?—Just so.

1931. (*Dr. Jones.*) What per-centage of loss had you on those cattle which you had in quarantine at Thames Haven?—It was a small cargo; there were 37 head of cattle, and 180 sheep, and I believe that they lost about 200*l.*

1932. What per-centage do you suppose that was of the value of the cattle; what did they deteriorate by those ten days' quarantine?—I should think about 20 per cent.

1933. (*Professor Spooner.*) Are you aware whether any cattle from the steppes of Russia have reached the English market?—I am not aware; I should think that it is not likely; if they have done so it has been after a period of many months from the time when they left the steppes.

1934. Would you be able to distinguish cattle from the steppes from other oxen?—That I cannot say; a certain breed occasionally comes to the market, a grey animal, and we understand that that is a breed which comes from Podolia; but these cattle do not come directly from Podolia to this country; they are driven first from Podolia to Hungary or Bohemia or Poland, and there they are fattened, and thence they come here.

1935. Are there not stringent measures of inspection instituted in those countries through which they travel?—Very severe; it is hardly possible that a diseased animal should come, and I might remark that although it has been proved that these animals have been a possible cause of the outbreak here, there has never been one detected in this country, there has never been a case of the disease in these cattle on their arrival.

1936. You have spoken of cattle being transported from this country to Holland, and conveying the disease there?—Yes.

1937. Those were foreign cattle, were they not?—They were cattle consigned to a salesman, there were 23 of them. The trade had been good, and a speculator, I believe, had bought them; he had bought them dear, and he sent word to say that they should realize 19*l.* 10*s.* apiece here. The salesman could only get 13*l.* 10*s.* for them; and after being exposed for sale on three market days he wrote to his principal for orders, and the orders were to send them back, and they no sooner arrived at Schiedam than they fell ill, and, I believe, that they only realized about 3*l.* 10*s.* there, and they gave the complaint to the cattle right and left.

1938. They were foreign cattle?—Yes; Dutch.

1939. They had been of course subjected to inspection before they were landed in England?—Certainly; there is no doubt that when they came here they were perfectly sound, but after being in the market for three market days they took the contagion, and carried the complaint home with them.

1940. You have stated to the Commission that the majority of the foreign animals sold in the market are for the purpose of immediate slaughter?—Quite so; at least that is the case this year, with scarcely any exception. There were a few bought for store in the early part of the season, but they unfortunately, having been in the market, took the complaint, and carried it along with them. After that I should not think that they had sold one for that purpose in the last three months.

1941. Are you not aware that the London dairymen have been large purchasers of foreign cows?—Certainly; always of Dutch cows.

1942. Have not those cows generally been purchased by them in the Metropolitan Market?—A very large trade is carried on in Dutch cows at the wharf. The owners of the cows attend there, and the buyers go and buy them at the wharf. I think that more Dutch cows are sold out of the market than in it.

1943. What is usually the condition of those cows at the time of the purchase?—Milch cows of course are almost always poor, or of small value as meat.

1944. Have you not seen a great deal of this disease?—Yes; unfortunately.

1945. What is your opinion with regard to its effects upon foreign cattle as compared with English?—I am not aware that there is any difference. My experience is that during the time of its prevalence cattle of all sorts which came to the Metropolitan Market took it.

1946. (*Mr. Wormald.*) Where were these cattle kept which were not sold. You say that they were in the market on three successive market days?—

Most likely they were kept on a piece of land in the vicinity of the market.

1947. You do not know?—I cannot state for certain.

1948. (*Mr. Read.*) Do you consider this to be a new disease?—I do.

1949. You never saw it before in England?—Never.

1950. Do you believe it to be highly contagious?—Without doubt.

1951. What is your opinion as to its origin?—I have not the least idea, but I believe it to be a complaint which has originated in this country; there is a complete absence of proof of its having come from abroad.

1952. You say that if there is to be a quarantine of foreign stock there ought to be good slaughter-houses built at the port of landing?—Yes.

1953. In that case there would be no very great loss if cattle were slaughtered which were upon the spot?—Not so great as at present.

1954. Store cattle do not now to any great extent go from the Metropolitan Market to the provinces; but do not store sheep go?—Yes; a good many.

1955. If the market is now in a contagious state, do you think that those store sheep would convey the contagion to bullocks?—I suppose that they would, but I do not think that there is any complaint that they have done so.

1956. But you have heard that they do convey the contagion?—Yes.

1957. Have you ever had any cattle come from Russia?—Not direct. I have had cattle, and most likely Russian cattle, which have been fattened in Galicia, but none direct.

1958. I suppose that one reason for there having been no foreign cattle affected with the plague is that they are subject to very sharp inspection?—I am not aware that the plague exists where our cattle come from.

1959. In Holland?—In Holland it has existed of course, but it was taken to Holland from here. I have written to all parts, and nobody has heard of such a thing.

1960. Have you written to Austria?—No.

1961. To Hungary?—No.

1962. Or Russia?—I have had correspondence from Russia, from Revel, and they say that they have not had any complaint there for five years.

1963. Had they not the Cattle Plague in Esthonia last December?—No.

1964. (*Viscount Cranborne.*) I suppose that the reason why you do not get cattle from Russia is because there is no railway accommodation?—There has only been one attempt made, but it did not pay, the cattle were so small and so inferior, and the expense of transit was so great that there was no appearance of profit to result from the trade.

1965. But you get cattle from Galicia?—Yes, but they are larger and better.

1966. You do not therefore anticipate any probability, even when railways are made, of much of a cattle trade from Russia?—I should think not.

1967. Do you know whether there is any effective inspection of cattle upon their entry into Austrian or Prussian dominions from Russia?—I cannot say of my own knowledge, but that such an inspection does exist, and that it is a very severe one, is quite certain.

1968. Even for those cattle which are intended for the through trade, and are not intended to stay in Austria or Prussia?—Certainly.

1969. Is there any sort of quarantine for cattle which are supposed to be affected?—There is one at the Russian frontier of I believe 15 days.

1970. What per-centage of foreign cattle imported before this Rinderpest broke out used to be taken for the purpose of fattening?—It would be an exceedingly rough guess if I were to attempt to say. I should say that in my own trade it would not be more than 10 to 15 per cent.

1971. The remainder were killed?—Yes; we sell a very large quantity of our foreign cattle for the purpose of slaughtering in different parts of the country.

1972. How far into the country does that trade go?—They are bought by buyers from all parts of Kent, also from Birmingham, and in fact from almost all parts. As soon as we receive large consignments the prices fall; it is then said abroad, "The prices "in London are lower," and then we have buyers from all parts.

1973. These are butchers from Birmingham and elsewhere who purchase the cattle in order to slaughter them as soon as they arrive?—Some are butchers and some dealers.

1974. But it is always for the purpose of slaughtering?—Yes.

1975. In the present state of the weather, and in the temperature which we may expect for the next six months, would there be any insuperable difficulty in that meat being sent out dead instead of alive?—No, not much; but I must also add that this trade exists principally in the summer and in the autumn; that is the time when we have our large supplies, and then buyers come for them.

1976. You mean that your supplies would rather fall off as the season gets on?—Yes.

1977. Do you not think that in the present state of the market, and with the prospects before us in England, our supplies are rather likely to increase?—I think that it is very likely that there will be a larger supply from abroad next spring than we have yet had.

1978. Have you at all given your mind to the consideration of whether the stoppage of all movement, except for the purposes of slaughter, would be a practicable measure?—I doubt whether it would. I think not. I think that the only means of checking the complaint is that wherever it exists there shall be a cordon round the place, that wherever the disease is known to exist no animal shall leave those premises until a certain time afterwards; and that in the meantime, if the owner has cattle fit for food, they can be killed, and sent away from his premises as meat; but that wherever the disease is known to exist that place shall be isolated.

1979. I suppose that if the disease existed very largely it would practically amount to the same thing as stopping all movement?—To a certain extent, of course.

1980. For instance, London would have to be isolated to stop it?—That would be hardly possible, but still it would be desirable. At the same time to carry out a law of that kind you must compensate a man who for the general good of the country suffers a pecuniary loss.

1981. The seller or the buyer?—The seller. I mean the farmer, who unfortunately has the complaint break out in his stock. It would be said to him, "Your cattle are diseased or suspected, and you "must not move them;" then he would say, "Are "they to stop here and die?" If they were poor stock they would have no value as meat, therefore he might possibly lose his stock, which would be of a certain value, and it is only fair that he should be paid some remuneration for his loss, as it would be incurred for the good of all.

1982. Would you remunerate him upon all diseased as well as upon all healthy cattle?—Only upon his loss.

1983. Whether the Government interfered or not, he would have some loss by reason of the disease; would you compensate him for that?—Certainly not. I should say that the operation would be this; there are a certain number of cattle which are killed and buried, that is of course a total loss, and he ought for that proceeding to receive a certain amount of compensation, say one half or two thirds. It is all very well to speak to large men, and say, "You can afford "to lose a thousand pounds;" but poor men cannot do so, and they would be ruined. They have there-

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fore no alternative but to send their cattle away, if possible; and thus the disease has been propagated; whereas if compensation were paid for the cattle being taken away from them by Act of Parliament they would be better off, and the disease would go no further.

1984. (*Chairman.*) Supposing that all movement of cattle, as some witnesses have suggested, is stopped in the country, do you think that there should be any compensation to owners who have no diseased animals on their farms, and yet send meat to market?—I should think not.

1985. Only to those who have diseased animals?—Only to those who have their cattle destroyed.

1986. (*Viscount Cranborne.*) And only then when their cattle are buried?—When it is a total loss.

1987. (*Dr. Playfair.*) I do not think that you quite understood Lord Cranborne's question, which was, whether you would give compensation to the owners of those animals which died of the disease, or to the owners of healthy animals sold by the order of the inspector to avoid the spread of the disease?—Undoubtedly to both; but at the same time where the animals were healthy and to a certain degree fat, so that they had a value, I should give no compensation.

1988. Supposing that a man by his own gross imprudence introduces a diseased cow into his herd, and the rest of his herd became diseased, would you give a premium to that man in the way of Government compensation?—Certainly not, because you would not in a case of compensation give a man the full value.

1989. Would you give him any compensation?—Of course, if it could be proved that it occurred by his own imprudence I should give none.

1990. Would not such proof be very difficult?—I should think it very unlikely that a man would act in that manner.

1991. It has been stated in evidence that in a great many cases persons have done so through imprudence, by not keeping the newly purchased stock separate from the others?—That might take place; but compensation would of course only be given under certain conditions.

1992. (*Chairman.*) With regard to sheep, do you import sheep?—Yes.

1993. What is the number imported into the country?—I think that the number this year would be about 500,000.

1994. Are they imported for the purpose of selling to the butchers or to the farmers for grazing?—They are probably merely imported for slaughter, but many of them are of very inferior quality, and are sold for stock.

1995. A larger proportion of the sheep imported are sold to graziers than of cattle?—At present, most certainly.

1996. You have stated something with regard to quarantine; do you believe that quarantine at our ports would be practicable?—Perhaps so, upon a small scale, but it would be impossible universally; and I may remark that the keeping of large quantities of cattle together, if the disease exists, would only give that disease in a much stronger dose. There are arriving from Tonning to-day and to-morrow at least 2,000 beasts. If there is a case there which should lead to suspicion, they must all stop, and there is not room for half the number.

1997. You have stated a case where you believe that the disease has been sent to Holland by cattle which have come over to this market, and have been returned to Holland; is it often the case that cattle are returned?—It is very rare.

1998. Why were those cattle returned?—It was an act which showed a very great want of judgment. The man who had them for sale could only make a return which would bring his principal a heavy loss, and therefore he sent them back, but by so doing he acted very imprudently.

1999. (*Mr. Read.*) Did you ever hear of such a case before?—Very rarely before; perhaps not above two or three times in all my experience.

2000. (*Dr. Parkes.*) I suppose that you are acquainted with the arrangements for the transport of cattle, and the treatment of cattle on board the vessels?—Certainly.

2001. What is the condition of the vessels; what arrangements are made for the proper transport of the cattle?—Of late the vessels have been exceedingly improved. When this trade first began the ships were small and badly ventilated; they now carry a large number of cattle, and are well ventilated. The ships now carry from 300 to 500 head of cattle each, besides the sheep, and they take a certain amount of hay and water, and they convey a certain number of men, according to the size of the ship; and it is their business to see that the cattle are supplied with water and food on the voyage.

2002. Is that fixed by regulation?—No.

2003. It remains with the owners?—Yes.

2004. Is the management the same on board all the vessels?—Pretty much the same.

2005. How often do the animals receive water?—Morning and evening.

2006. Do the men at all clean out between decks?—Not on the voyage.

2007. Are there any special means of ventilation?—They have hatches, and they have also what they call wind-sails.

2008. But nothing more than that?—Nothing more than that.

2009. Do they use, or did they use before the occurrence of this disease, disinfectants of any kind?—Very rarely.

2010. Do they now use them?—Yes.

2011. What do they use?—I believe that they principally use chloride of lime.

2012. How many cattle are taken in a ship? Do they take them according to the tonnage?—According to the measurement.

2013. Is there any rule in that respect as to the space given to cattle?—None.

2014. Are they placed as close together as they can be?—Yes.

2015. They are tied by the head?—Yes; to a certain extent the cattle are better when they stand close than when they stand loose.

2016. On account of the movement of the ship?—Yes.

2017. During a two or three days' voyage do they at all fall off in condition?—Not much; but during a bad voyage they suffer exceedingly from the motion of the ship, and they are knocked about from side to side occasionally, and they become badly bruised.

2018. Is there any inspection of these vessels when they arrive, as to the number of beasts which have been brought, and their treatment during the voyage?—No.

2019. It is entirely left to the importers or the owners of the vessel?—Entirely.

2020. Is it your opinion that that trade is now conducted on good principles and in a good manner, or the reverse?—I think that it is conducted very fairly; I think that occasionally the ship is too full; for instance, during a long voyage, when the weather is bad, and there are too many cattle down in the hold, the heat is such that the cattle are overpowered, and there is no doubt that if they were not quite so thick they would get through the voyage far better.

2021. Does that often occur?—Occasionally; for instance, I received some cattle from Holland yesterday; 18 were put into a compartment where there was only room for 14; out of those 18 two died, or, rather, one came out of the ship dead, and the other had to be killed in consequence of exhaustion. I cannot say what ship they came by.

2022. Do you consider that inspection and regulation as to the amount of cattle which a certain vessel is capable of carrying would be a good measure?—Exceedingly good.

2023. And regulations as to the amount of water and hay ?—Certainly.

2024. It is, I suppose, the interest of the importer to take every possible precaution ?—Undoubtedly. It is the interest of the steam-ship proprietor to get all that he can, but it is the interest of the owner that no more animals shall be put on to the vessel than it can carry.

2025. (*Mr. Read.*) Do you think that a system of mutual insurance societies would be preferable to Government compensation ?—Upon that point I can give no opinion, provided that owners are compensated for their cattle.

2026. Whether that is by mutual insurance companies or by the Government ?—I think that it would have more effect and more power as a Government measure, because I think that in cases of mutual insurance in small districts, in case of the outbreak of disease, to a certain extent they would be all losers, and there would be no payers.

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2027. You would not call a small insurance company one which comprised a county ?— Certainly not.

2028. (*Chairman.*) Is there anything further to which you wish to draw the attention of the Commission ?—I think not.

2029. (*Mr. Wormald.*) Has the quality and condition of the cattle imported for slaughter much improved ?—That I can hardly say. This year we have had a very bad season, and therefore our cattle have come to hand in an inferior condition ; last year they were far better.

2030. (*Mr. Read.*) When you speak of a bad season, I suppose you mean that foreign cattle are principally summer grazed ?—Yes.

The witness withdrew.

Mr. HERMANN GEBHARDT examined.

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2031. (*Chairman.*) I believe that you are a large importer of foreign cattle ?—I am a salesman.

2032. Do you purchase foreign cattle on your own account, or are they only consigned to you ?—I never purchase ; they are all consigned to me.

2033. Can you state the number of foreign cattle which you usually import into England?—I should say about 400 a week on the average ; because sometimes in the season we import more and sometimes less ; and I sell a great many sheep. I should say that I sell about 2,000 a week.

2034. Are they all foreign ?—Yes. I sell nothing but foreign cattle.

2035. Taking the horned cattle, from what ports do they mostly come ?—In a certain time of the year, for instance, from July up to the end of November, the majority of them come from Schleswig, Holstein, Oldenburg, and Holland. From Spain I get them all the year round. From Vigo and Corunna they come every week at all times of the year. From the beginning of December up to about the middle of August they came more from the southern parts of Germany, being shipped by way of Hamburg, Rotterdam, and Antwerp. They come from as far as Hungary. Last week I had some from Galicia, from Lemburg. The principal part of my cattle come from Magdeburg, Berlin, and that district. So again, from the Rhine, they come from Wirtemberg, from Baden, and from Bavaria, and as far as Cologne upon the Rhine.

2036. Has the trade in foreign cattle increased very largely of late years ?—Very much, indeed ; it is increasing, I believe, every day ; in fact there is hardly sufficient accommodation to bring the animals over here, and the different steamboat companies can hardly now bring them, although there is more accommodation than there was some years ago.

2037. From whom are they consigned abroad to you ?—The trade in the northern countries, such as Schleswig-Holstein, is generally direct ; the grazier sends his own cattle, so that we get them in lots ; one man sends one bullock, or perhaps the larger graziers send 10 or 20. The other trade in Magdeburg and Berlin, and so on, is carried on by jobbers ; they send the animals in large lots. The Spanish trade, which come to about 100 animals a week, is carried on by one firm in London ; they are bought in Spain.

2038. By what route do the Hungarian cattle come to you ?—The majority of them, I believe, come by way of Bavaria to Mayence, and up the Rhine, but some come by way of Hamburg. I do not think that so many come by way of Hamburg as the other way ; we get the Podolian and Galician beasts by way of Hamburg. Of Russian beasts, we have had none, except one cargo. I have made it a matter of special inquiry, and there has never been a Russian bullock in Hamburg for the last ten years. It was gravely stated by Professor Gamgee when the disease first broke out, that week after week Russian cattle found their way to this country by way of Hamburg ; but I can state upon authority that that is false, there has been only one lot arrived about 10 years ago, from Russia, excluding this last cargo, and they were so very bad they hardly could be sold, and they never sent any more.

2039. What is your authority for that statement ?—I have it from the largest salesman in Hamburg, who knows that no other animals came but these particular ones, and that they were so bad that no others did come ; he is a man well known, I believe, all over the continent.

2040. Have you any information as to the countries where the plague exists ?—No ; I had a gentleman here last week from Lemburg in Galicia, and I asked him whether they had had this Rinderpest in that country, and he said, yes, that they had had it in former years, and very severely; but that for the last three years in the whole district he had not heard of one single case. He gave me some information as regards the treatment there.

2041. With regard to Hungary is there any disease there now ?—No ; they have none in any of those parts from which I receive cattle, because I made it my business to write to a gentleman who was then staying in Vienna, and who was sending to me 1,000 sheep a week, and about 50 beasts a week. When the disease broke out I was afraid that perhaps these beasts might be stopped, and I advised him not to buy any more, as the public feeling was very much against foreign beasts.

2042. (*Dr. Playfair.*) To what part of Hungary do you allude ?—I cannot say, because the correspondence always comes to me from Vienna.

2043. (*Chairman.*) Has Hungary, in your belief, been free from the disease for some months past?—Yes. As far as I can learn, they have had none there this year for a certainty ; as to former years I cannot say ; but this year there have been large consignments ; and as I have said in the part where this gentleman was buying his cattle they were quite free.

2044. You receive cattle from Holland, do you not ?—Yes ; I receive a great many from Holland ; but they are not Dutch cattle ; they are shipped by way of Rotterdam, but they come from the places which I have stated before, Magdeburg and other places.

2045. There is a great deal of disease in Holland now ?—Yes.

2046. All these cattle from the south of Holland and Germany pass through the infected districts before they embark ?—I do not know that they do ; I believe that the place where the disease is is in a different part. I am told that the district is quite

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excluded from any traffic, and that they will not allow the animals to come out.

2047. That is as to through traffic?—I believe that where the railway comes is not at all near the place where the disease is.

2048. Can you state what regulations are in force in Hungary, Prussia, and Holland with regard to cattle exported to other countries, in order to detect disease; are there any inspections?—I cannot say much about that matter, except what I heard from a gentleman last week; he said that the moment that the disease broke out in their district, the place was totally surrounded, by order of Government, with police or soldiers, and that the diseased cattle were taken away from the others, and immediately killed and buried. The Government compensate the owner for the cattle which they order to be destroyed, about two-thirds of their value. As regarded the sound cattle, they tried as much as they could to separate them as far as possible, and supposing that a man had 100 beasts, and had not room enough to give them all a separate stall, he would actually drive posts in the field, and tie them all apart at a distance perhaps of 100 yards, to get them as far apart as he possibly could.

2049. Do you not think it possible that animals should reach this country from an infected district abroad?—I do not think it possible. I believe that it takes the cattle from Hungary 12 days to come from there. I have got this from the drover himself. Of course you know that we can travel much quicker to Hungary, but these cattle trains do not go right on; there are delays from one country to another. For instance, the cattle which came from Galicia had the greatest trouble in the world to pass the Prussian frontier; they wanted to unload them, and this gentleman told me that he had a wonderful deal of trouble before he could get through with them. I believe that they were the first cattle which came from that part.

2050. What caused the trouble; was it occasioned by any regulations of the Government?—It is the police regulations. These animals came from Galicia, and they had to pass the Prussian frontier; and the gentleman said that he had a great deal of trouble before he could get them passed; not that they refused to let them in, but that there was a great deal of difficulty and delay. I had cattle here from Hungary, and the drover said that they were 12 days coming; it was at the time when the disease broke out, and Professor Simonds came to me in the market, strongly impressed with the idea that the Hungarian cattle were affected; they used to call Hungarian beasts also Russian, and if anybody saw a white bullock he thought that it was Russian. Professor Simonds asked me where the beasts came from, and I said that they were Hungarian beasts. He was afraid that some of those beasts might have brought the disease. I had sold in the previous week 50 of these beasts to two gentlemen in Bristol at 25*l.* a piece; they came early to me in the morning, and said, "Have you any more of those white beasts?" I said, "I have no more, but shall have some next week." They said, "Will you give us the refusal if you have some?" I said, "Why?" They said, "Because they are as fat as we have ever seen." This was the Monday following. The others were in a field, and are doing as well as could be. The beasts were 12 days coming, and were two days at my farm, making 14 days; and this gentleman had them the week afterwards in Bristol, and killed them the following week, so that is more than three weeks; he has sent them regularly every week.

2051. As regards the animals which are imported from abroad, do you sell many of them for grazing?—Very rarely; I should fancy that I do not sell 100 beasts a year for grazing; I might almost say hardly any.

2052. You have told us about the inspection abroad; is there any strict inspection at the ports where the cattle land in England?—It is very severe; it has always been severe; but they are now still severer. They will take a whole cargo, open the mouth of every bullock, and lead him out singly. In fact there are men now inspecting cattle who are not fit to be inspectors. I may mention a case. I farm a good deal of land, besides being a salesman, which is necessary for my business. I have a herd of very valuable stock at Muswell Hill about four miles from London; they are pedigree stock. They have now an inspector there, who is a shoemaker at Highgate; another man is a publican. These men are appointed inspectors, with unlimited power, and I actually gave my man orders if they came to my place to use force, and not to let them on the place. I have been many years in the trade, and have had no disease, but I am not certain that they would not bring it in, and they might order animals to be condemned which had no signs of the disease. I was unfortunate, one of my pedigree cows knocked her hip-bone off, and she is now lame; and if this man came he very likely would say that she was diseased, and would order the whole lot to be killed.

2053. Who appoints these inspectors?—The magistrates.

2054. The magistrates of what petty sessional division?—The magistrates of Highgate. This man is a shoemaker, and is a tax collector. It is a great shame that such things should be allowed. All the people around me have valuable stock, and we cannot tell what mischief such a person may do.

2055. Have these people no veterinary experience or knowledge whatever?—This man has been a shoemaker all his life, and they made him tax collector, and he collects the poor rates. He knows no more about disease, I believe, than a child does.

2056. Has there been much disease in the district?—Yes; he condemned in the case of one man 27 cows, and I believe that the man is going to law with him; that is the only case that I know of.

2057. That has reference to local inspection?—Yes.

2058. But we were speaking of inspection at the port?—They are very rigid and severe.

2059. Are they equally rigid at all the ports?—Yes, I believe so. The other day they detained a cargo in Harwich, and they said that that cargo had the Rinderpest, and they killed a lot, and after some of the beasts had been there a fortnight they had to give them up again, and a lot of them were killed on suspicion; but we have no remedy. We will say, for argument sake, that the inspector of the wharf says that one animal has the disease, and that all must be detained. I say, "If we keep this animal "for some time will you give them up?" He says, "I perhaps will give them up in a week again." Then we know that there is a certain loss, and we will not risk it, and we have them killed. If they have not the disease they have a very great chance of getting it, these wharves being very dirty places, and therefore we take the remedy at once, and have them killed at a great sacrifice. I think that 280 animals were all slaughtered at Blackwall, and there was actually only one cow amongst the lot which had the disease, for it was proved that the other animals never had it. Another cargo of cattle was detained a fortnight on suspicion, and then given up as sound animals.

2060. Where did these animals come from?—They were shipped at Rotterdam; but of course there were a variety of cattle, perhaps some from Germany and some from Holland.

2061. One cow had the Rinderpest, and the others, though in the same ship, did not take it?—Yes. Of the cattle at Blackwall some were not killed for nine days, because the weather was so hot, and they had so little room that they could only kill 40 animals per day, and they were there for nine days with no sign of disease.

2062. Where were they placed during those nine days?—In a very bad place; they were all the time under a broiling hot sun, and they could not allow

them to be on the wharf on account of other steamers unloading their cargoes every day. This is such a great grievance that if such things happen there should be proper wharves or slaughter-houses provided where they can be taken to, because the other cattle land every day, and there is nothing but a partition between them to divide the supposed healthy ones from the supposed diseased ones.

2063. Your attention has been drawn to the Order in Council which has been lately issued restricting the sending of animals to the Metropolitan Market except for the purposes of slaughter?—Yes.

2064. What is your opinion with regard to that?—I don't see how it can be well carried out. I have not read it very particularly. I think that you might prevent cattle being sold for keeping, but you cannot order that all the cattle shall be killed in London, because a great many go out again from London, and therefore they have applied the remedy of cutting the hair off their tails, which shows that they are not intended for killing.

2065. Do you suppose that cattle with this mark upon them are sent for the purposes of grazing?—None this year. Last year a great many which came from Holland, young beasts, 12 or 18 months old, were sent over here for grazing, but I am not in that trade.

2066. Are not animals which are marked in this way often sold for grazing instead of slaughtering?—I do not believe that under the present circumstances they would be, because I do not believe that at the present moment any person would buy them.

2067. Supposing that this order was vigorously carried out, would it have an effect upon the foreign trade?—I do not think that it would at all; as long as they do not compel us to kill the beasts in London, and they have to go to some place to be slaughtered, it does not matter.

2068. Suppose that there was an order to kill them in London, and that no animal was to leave London alive?—It would be very injurious, and I do not see how it could be carried out, because even the Government will not take the supplies in any other way than alive, at Aldershot, Portsmouth, and Plymouth; they all must be sent alive. The supplies are chiefly foreign beasts, because they are cheaper, though they are good beasts; the prices of the contract would not allow the contractors to buy the best English beasts.

2069. Would it not be possible for them to have the beasts slaughtered in London, and to have the meat sent down as wanted?—Yes; but the Government will not take it so.

2070. But the Government might alter its system?—It could not be done in summer, it would be spoilt before it got there.

2071. But in the next six months it might be practicable?—It might perhaps do in cold weather. I wish to mention one other point: many thousands of beasts go into the country which are bought by private butchers. I should fancy that one third of our supply in the Metropolitan Market goes out again for killing.

2072. And the animals are not killed for some days?—That depends upon circumstances. I believe that it is generally supposed that the butcher provides himself from one week to another, and kills his beasts as soon as he can, because the longer they are kept on hand the more they waste.

2073. It has been suggested by some witnesses as a means of stopping this disorder in England that all movement of cattle in England should be stopped, and that animals should be slaughtered where they are grazed; what have you to say to that suggestion?—I do not see how it is possible to be done; I think that it is totally impossible.

2074. Supposing that it was thoroughly carried out, and that foreign cattle had to be slaughtered at the port where they arrived in England, would it stop the trade to any great extent?—Yes; in fact you might just as well prohibit importation altogether, because the sacrifice would be so great that the people would not send the meat; we now get these large supplies, because we make more money of them than they do in Paris. I am now selling at least 2,000 or 3,000 sheep a week. The moment you made such restrictions the meat would be worth so little money that the animals would not come. I do not see any good in preventing the movement of cattle; the only good that I can see is by preventing their being moved when disease breaks out, but what is the use of preventing sound cattle being moved about?

2075. With regard to sheep you import very largely?—Yes; I sell a great many.

2076. Are there any facts with regard to the trade in sheep which you wish to state to the Commission?—No; we have had nothing with the sheep. Some years ago there was the small-pox, but of late years I do not know that I have had one sheep detained, except it has been injured on the journey.

2077. Where do your sheep come from?—They came from all the parts which I have mentioned before, but I think that the majority of them came from Baden, Wurtemberg, Bavaria, and Magdeburg.

2078. What would be the effect of stopping all the fairs and markets in the country?—I do not think that it would be such a wonderful thing. You are alluding to store animals, I suppose?

2079. Yes?—I do not think that it would have such a great effect, because, as far as I can learn every farmer is almost frightened to buy them in a fair. I think that they would rather buy them in the homesteads, one farmer from another, than to go to a fair. I believe that now a cargo of cattle is coming from Schleswig-Holstein, all store cattle, and, I am told, all intended to be sold in Norfolk by two Englishmen who went over there and bought them; but I am told that they do not intend to bring them into the market, but to bring them directly to the farmers when they land them.

2080. What would be the effect of stopping the country market as regards fat animals for the butcher?—I think that they might stop the country market sooner than they might stop the town market in large places; because, if you leave such markets as London, and Liverpool, and Birmingham in existence, butchers might get supplied in smaller places from the country. In fact Birmingham is to a great extent supplied from the London market.

2081. You have thought a good deal about this Rinderpest in England?—I have.

2082. Have you formed any opinion as to how it should be got rid of in the country?—No; and I think that no other man can. My belief is that the only way to prevent its spread is, that when it appears people should not be allowed to take the animals away, or move them. Whether it can be cured I do not know; but the universal practice abroad is to kill them there and then when the disease breaks out, and I believe that, in the long run, it is the safest. Government always compensates the owner. If they kill those which get the disease it may perhaps save the others. The gentleman whom I have referred to told me that directly the disease shows itself they take the cattle out of doors, and tie them about 100 yards apart to give them fresh air, and keep them separate as much as they can.

2083. Have you formed any opinion as to the origin of the disease?—I am quite of opinion that it is not imported. I think that it is a disease like cholera, or any other disease which is in the air; and I am in hopes, and believe, that when we get cold weather, it will leave us as it has done in other countries.

2084. Have you any evidence that when cold weather has come on the disease has disappeared in other countries?—I have had the evidence of a gentleman for whom I sold beasts last week. He told me that it was generally the case that they got it in hot weather, and that when the weather became cold it left them, although he had known it to break out in cold weather, but that generally

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when the disease came in the summer it diminished and disappeared altogether when the cold weather came.

2085. You have given us rather a forcible illustration of the manner in which Government inspection is carried on in a district where you have a farm; have you any other case to illustrate the working of the system now in force in the country?—No; I have only one remark to make, which is, that power is now given to inspectors which ought not to be given. On Monday I had 40 or 50 beasts by train from Thames Haven; one cow broke up and split her haunches. She was killed, an inspector from the Islington vestry went and condemned her, she was as sound as ever was seen, but only was broken in her hind quarters. The market inspector said that she was sound and fit for human food; the Newgate Market inspector did the same. I then demanded the animal of the party who had condemned her, but it was of no use. He showed me the order of the magistrate, and she was taken away, and was destroyed at a loss of 20*l*. The magistrate had never seen the animal, but some inspector, nobody knew who he was, condemned her.

2086. Was that an inspector appointed by the Privy Council?—No; it was one of the parish inspectors. They go before a magistrate, and the magistrate has never seen the animal; in fact I was advised that the magistrate ought to have seen the meat, but the magistrate never saw it; it was merely that this party came to him and said, "Here is an "animal not fit for human food," and he gave an order for it to be destroyed.

2087. Is that inspector a veterinary surgeon?—I do not know him, but he showed me a paper giving him power. He said, "If you oppose the removal of "this beast you do it at your own peril; if you do "not let it go I shall bring two policemen, and if "you have any men here to prevent me I shall bring "40, and you will bring yourself into trouble," and so I was obliged to let it go.

2088. What becomes of the meat?—It goes to the knackers, and they put some stuff on it to destroy it.

2089. (*Mr. Read.*) You call this disease the Rinderpest. Why?—I do not call it the Rinderpest, and I do not know that it is the Rinderpest, and I have very great doubts whether anybody in this country knows that it is the Rinderpest.

2090. Did you ever see it in England before?—No.

2091. It is quite a new disease?—Yes, I never saw it abroad.

2092. Did you ever see the Rinderpest abroad?—No; never.

2093. This is a highly contagious disorder?—I believe that it is very contagious.

2094. You say that no store cattle go out of the Metropolitan Market now to be grazed; sheep do, I suppose?—Yes, they do. I do not think that any men would buy cattle for that purpose at present; I do not hear that anybody buys them; I do not believe that any one would be fool enough to do it.

2095. Why do you say that a man would not be fool enough to do it?—Because we have had this disease in the market, which has been brought there from the London dairies, the hotbed of all diseases among cows. The moment the London dairymen had a diseased cow they sent some others which were not diseased with the diseased one to the market, and there is no doubt that we had the disease in the market to a very great extent. The authorities have cleared the market now, and have done all that they could, but it is quite certain that some diseased animals do come in every day.

2096. The Government contractors do not buy the foreign stock from their supreme healthiness, but from their comparative cheapness?—Yes; they get more weight for money; it is good sound beef, but it is not so good as our best English beasts; the animals are more bony, and there is more weight for money.

2097. They are not so thick in flesh?—No.

2098. Would you not recommend that proper slaughter-houses should be erected at the outports, in case any more of these cattle should be detained?—Yes; each outport has a slaughter-house, but it is not at all sufficient for such a calamity. All steamers should be examined by Government inspectors, to see whether they are fit to carry cattle, and not be allowed to carry more than a certain number, according to the size of the ship. A great many sheep and beasts are killed by overloading and want of ventilation.

2099. You do not think that stopping the store markets and fairs throughout the kingdom for two or three months would be injurious?—I think not, because if a man wanted cattle, I believe that he would just as soon go to a private place as to a fair. I believe that Barnet Fair has done a great deal of mischief.

2100. But you do think that the stoppage of all cattle trade would be exceedingly injurious?—Yes; I think so.

2101. (*Dr. Playfair.*) Are you aware that after the year 1744 there were 12 successive winters and cold weather without the disease being stopped?—Yes; I have read it in the papers.

2102. Then do you take the encouraging view of the matter that this winter will certainly stop this disease?—No; I say that I hope that the disease will go, as it has done in foreign countries before.

2103. But it did not do so in fact after 1744?—It did not.

2104. (*Chairman.*) Have you anything else to which you wish to call the attention of the Commission?—No.

The witness withdrew.

Mr. H. Hicks and Mr. J. Brewster.

Mr. Henry Hicks and Mr. James Brewster examined.

2105. (*Viscount Cranborne.*) (*To Mr. Hicks.*) What are you by profession?—A cattle salesman.

2106. Do you import largely? No; mine is the home trade entirely.

2107. Then you import no cattle at all?—None whatever.

2108. To what extent do you sell cattle in the Metropolitan Market every week?—150 to 300 a week.

2109. From what districts do your principal supplies come?—Principally from the east of England and Scotland, and from Ireland.

2110. Have you had many diseased beasts?—Very few.

2111. Has the number of animals supplied to you much diminished during the last few months?—Yes; from Ireland considerably.

2112. But not from other parts of the country?—Yes, from other parts of the country, because it is not the season. From Christmas up to July is what we call the winter grazing season; turnip grazing, which is the Scotch and Norfolk system.

2113. Are the mass of the animals which are sold lean or fat?—Fat.

2114. Were they so before this Rinderpest broke out?—Yes.

2115. You did not sell many to graziers?—No; very few.

2116. Where did those cattle which were sold to graziers come from?—They would be any cattle perhaps not sufficiently fat for the butchers.

2117. Do you know much of the movement of cattle from the countries where they are reared lean?—A good deal.

2118. At what period of the year are they principally sent into the market?—Do you allude to the Metropolitan Market?

2119. Yes?—That is principally a fat stock market; not many are sent there regularly, but merely by chance.

2120. Can you form any approximate idea of the per-centage of those sold for slaughter and those sold for grass?—I do not think that I can; but at the present time a very large per-centage leaves London and goes into the country, for the supply of the country trade for slaughter.

2121. With their tails cut?—No, without; but an order has been issued that they shall all be cut, which is a step in the right direction, for the purpose for which it is intended.

2122. I conclude that you think that that step might be carried a little further?—I think that a great many steps require to be carried a little further in order to be of any use at all in effecting the object which we have in view.

2123. What would you recommend?—My recommendation would be a quarantine for instance; pure isolation where the Rinderpest has broken out; isolation in every sense of the word; without that you will do nothing.

2124. That involves I presume enabling inspectors to prevent the movement of cattle; or do you mean only to prevent the movement of infected cattle?—Certainly of the infected cattle; for instance, that there should be a law that if a farmer finds that the Rinderpest has broken out amongst his stock they must all be isolated. I do not say but that in the early stage the cattle may be saleable and useable, and not injurious to a human being to eat, but it must be in the very early stage, before the disease has discoloured the beef, which it does. After the cattle have had the Rinderpest for a short time you will find the carcase of the animal a foxy colour, as if it had been scorched, and I should not like to use it.

2125. Do you think that the farmers generally, with a prospect of isolation before them, would voluntarily report that they had Rinderpest?—Then you have the other way of meeting it, namely, to make men know that it is their interest to be honest, and until you make men feel that, you cannot do much, because they will naturally keep secret their troubles.

2126. How can you exert that influence?—By making them know that there is a compensation. I see no other plan.

2127. Would you give compensation for all healthy animals killed?—For all animals destroyed. By that means when a farmer finds himself in trouble he will immediately make his troubles known, because he will feel that it will establish his claim better. On the other hand, when a farmer finds himself in trouble by finding two or three of his cattle diseased his first care is to get rid of all the rest. He will not immolate himself upon the altar of his country, and allow himself to be a ruined man. The difficulty is that the most scientific man cannot point out the disease before it is evident; it is very subtle, and it will remain in abeyance for many days, and although the animals may appear sound when they come into my hands, and I believe them to be sound, they may not be so; they may have the disease incubating in them, which after they have parted from me will break out elsewhere; and that is where we find the greatest trouble at the present time. Many of the London cows and others which have been infected, and which do not at first show the disease, find their way into our market, and are sold quickly, because they are wanted to be turned into money. Some men hover round these animals like birds of prey round carrion, because they buy them cheaper, and then they carry them away into the country, particularly to Birmingham and those places, and they have infected everything which they have come across.

2128. Supposing that Government were to forbid that practice, and to say that cattle entering into any fair or market must be slaughtered immediately, and only exported dead, what would be the effect?—Then you would divide the supply and the demand, and you would destroy the trade, for they cannot exist apart. I should think that 2,000 cattle a week are taken out of London; both the buyers of those cattle and other parties would be sacrificed.

2129. Might not buyers buy them dead?—They perhaps do not require them dead immediately. They buy them perhaps once or twice a week, and in warm weather particularly the offal would come to a very bad account, and so would the beasts. In fact it would not do.

2130. Might it not do in cold weather?—I think not. I think that it would be impracticable. I have seen a good deal of it for many years. There is another point under the orders as to the traffic of cattle through the streets. Now it is not well for us to stop the traffic through the streets; but there is no doubt that the Metropolitan Market has been the great source of the disease, and particularly in its lairs. According to the law, if the beasts cannot get out of the market before a certain hour of the day they are not allowed to travel through the streets before seven in the evening. The consequence is that nearly all the cattle after they leave the market are put into these lairs. They could not be put into a worse place, because many of these beasts are bought by the trade to stand four or five days before they are killed; many are high-priced beasts. They go into the lairs, where they have the best chance possible to catch the disease. If the law were that no cattle after being sold should be allowed to go into those lairs, but should be driven straight away from the market, it would make their chance of catching the disease less, and I think that a very important point. There is another point to which I should like to draw the attention of the Commission. When the cattle arrive at the wharves, if the medical inspector finds that two or three out of a shipload of 100 or 200 appear to be infected with the complaint, the whole lot is stopped; and there has been a case lately where they have been stopped a fortnight. They may be perfectly free or not; but, if they are not free, there is every opportunity for the disease to break out in all its virulence, and by that means this horrible contagion may be propagated. If cattle have it about them by any chance, or if any portion of them have it, the sooner they are killed the better, and the more likely they are to be useable for the food of man. Therefore, if cattle are to be at all stopped through quarantine it is much better that there should be a proper place for them to be taken to; and that they should be immediately sold for slaughter by the salesman to whom they are consigned, and got rid of at once, because the longer you keep them the worse it is if they have the disease, and if not, see the injury which it does. I have had a long experience of cattle; and I should say that the depreciation of cattle in London is at least 5*s.* a day, each, and sometimes more; and then there is an expense attending it, which is of importance.

2131. Then would you recommend that they should all be slaughtered at the port of landing?—I should not recommend it, unless they are decidedly diseased cattle. I have heard of great hardships where cattle have been detained, and there has been no disease at all.

2132. You are speaking of foreign cattle?—I am. They detain cattle upon suspicion, and after being there a long time they say, "It is all right, take them "away;" but mischief is done in that time. I have known cattle to lose 4*l.* and 5*l.* a-piece in consequence of detention. But even supposing that the medical adviser was correct in his opinion, the cattle would be worse, and the disease much more virulent than it otherwise would be.

2133. In fact you think that quarantines are impracticable?—I think that they are very injurious, because they would let the disease catch the healthy cattle, and would depreciate the value of them, and

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it would have much more power. They should be under supervision, but they should be immediately slaughtered and killed for use. They may be useable then, but I think that when the beef is so far marked that it changes its general nature; it is very doubtful.

2134. Do you not think that many cattle are infected and carried away from the port of landing or the market to the butcher, and kept there three or four days before they are killed, and that they are very likely to communicate the infection?—There can be no infection unless they are mixed with others.

2135. Have not the butchers generally other beasts?—Not in London.

2136. I am speaking of the country?—I could not give an opinion upon that point, but I should say that whenever they come into contact with other cattle it is almost similar to the case of a man being on fire and running out to some one else, and putting him on fire. If the cattle are allowed to mix with others they never will be free from the disease. There have been cases at Aylesbury this week, which hitherto had been free from the disease, and it has been given right and left to the poor people's cows.

2137. Have you had any opportunity of forming an opinion upon the efficiency of the inspectors?—That is a very serious question. The country cannot produce what is required; it requires practical men, and you have not them. I was a member of the committee of the corporation, but I resigned my position; I saw so much which I did not choose to make myself liable for, that I resigned; they appointed men who were not practical.

2138. What sort of men?—Veterinary surgeons who knew no more about the disease of the cattle than the dealers.

2139. But did they always appoint even veterinary surgeons?—I only had to do with the two inspectors in the city; but I consider that the committee broke down from want of power.

2140. (*To Mr. Brewster.*) Do you generally agree with the evidence which Mr. Hicks has been giving?—Yes; generally, except so far as regards the whole of the cattle being killed; and I do not agree with Mr. Hicks when he speaks of the disease as being contagious. My business chiefly lies with sheep; but I have studied this question since the disease first broke out, and have seen it, and the contagion is not so great in our cattle market as has been generally considered, and as I think Mr. Hicks believes. That is where I differ from him, because I have known several cases. Few animals would be more likely to suffer from the disease, than animals in the cattle market, and many have escaped. I can speak of a case where two cows have been in close proximity in the cattle market the whole time that this Cattle Plague has been in existence in England, and they are at present free from the disease; they are in a field adjoining to the market, part of what is called the market area.

2141. Where were they bred?—They are English cows. There is another case: I went this morning to a cowshed; there are certain routes laid down for cattle to go to our market; there is a route laid down from the east end of the town, where a great many cattle come from, and which have been diseased; but those cows are perfectly healthy, and I know that they have been in close proximity to diseased cattle from our market, which have not taken the disease with them.

2142. On the other hand, do you not think that an enormous amount of disease has been propagated by contagion?—I am quite certain that it is propagated by contagion.

2143. But you think that the contagion is not certain to take effect upon every animal?—Yes; and even in the cowsheds of London, where they have tried to treat it—I believe that it is quite possible to be cured, and there they have succeeded. A large proportion of the cows have been left in the sheds perfectly cured, and some have been free from the disease the whole time.

2144. Have you any instances of cure to mention to the Commissioners?—Not many, because my attention was devoted to it first of all; but when the committee was appointed in the city, it was intended to go fully into the matter by taking cows and having them treated by proper medical men (but from one cause or another that was not carried out), and I did not carry out my views, or I should have been very glad to have tried it. I believe that it is absolutely necessary, in order for you to learn the nature of the disease. I believe that it is perfectly curable, and I have found it so in several instances, and I believe that it is not so virulent as has been represented. I do not believe that the loss from the disease itself up to the present time has been so great as the loss by pleuro-pneumonia among the cattle either in London of in the country, but so much noise has been made about it that attention has been more drawn to it. I will grant that it is a most serious thing, for people have been so frightened that they have sent their stock away, and they have had it killed without any necessity for it.

2145. Have you not heard of cases where very large portions of the herd, or of the cowshed, have been swept away?—Not by the disease itself; a large quantity have had the disease, but a large proportion has not been swept away by the disease. I have not myself been personally to many cowsheds, but in those one or two where I have been I found it invariably the case that a minority of the cows had the disease, and were slaughtered in consequence, and the great majority of them are sent away from fear, and from the men being so perfectly paralysed.

2146. In how many cowsheds have you seen that to be the case?—Only one or two.

2147. Can you give us at all the number of animals which you have seen cured of the disease?—I only know of two cases where they have tried it. One where the disease had got through the shed, and they only tried it upon a small number; there were only two cows in one shed, where both were cured, and it was not a medical man who tried it there; the man succeeded in two or three cases in another shed, but cows died there, and lay for 36 hours, and were surrounded by 14 or 20 cows standing round them. In another case, where the person tried curative means, he sent away six or eight of his cows as soon as the disease appeared, and he saved eight out of eighteen.

2148. Had they been attacked?—Four of them had never been attacked, and the other four which were saved had been attacked, and recovered from it. They are all now giving milk, and they are kept in an isolated place.

2149. Were they saved by the veterinary surgeon?—Yes, no doubt of it.

2150. Have you seen the cows yourself?—Yes; and they are I believe giving milk. I think that that person had four different people to practise upon his cows. He gave each one or two cows to attend to.

2151. You do not know who the veterinary surgeons were who saved the four that were cured?—I believe that one man saved two, and another man one, and another man one, but I do not know their names; that is out of the 18 altogether. Out of the 18 cattle 10 were attacked, of which four were saved, and four were not attacked at all, by giving them preventive stuff, which he had at disposal. There have been several cargoes of cattle stopped from abroad, but in only one case has the animal been affected by the disease, and that came from Holland; and there are beasts now alive out of this cargo of cattle, and that is about four or five weeks ago; the Custom House will not give them up before they are healthy. A short time ago a cargo was stopped at Harwich, consisting of cattle, sheep, pigs, and calves; the whole were stopped; in about three or four days the sheep and the pigs were passed, the remainder were ordered to be kept, and we generally find that

it is better for us to kill them at once to save their wasting, than to have them kept in quarantine, because the Custom House will very seldom pass them until they have been kept a very long while. One man saved his beasts; they had been stopped 14 days last Wednesday, and they were passed without the slightest disease of any sort. Therefore if it was the disease it could not be so contagious, or these other beasts musts have taken it. Out of the whole cargo only one was seen with the slightest effect upon it.

2152. Is it your opinion that the inspectors at the out-ports are generally competent to their duties?—I only know the inspector at Harwich, and I believe that he is a man perfectly competent for his duties; that is the only one that I have seen personally myself.

2153. (*Mr. Read.*) Can you mention to the Commission any further proved cases of recovery from the plague?—I can only mention those two or three which I have mentioned; they are the only ones which I have taken any interest in, and I should infer that many cowkeepers in London must have some means of cure or prevention because they are refilling their sheds. I do not think that they would risk high priced cows unless they had some preventive.

2154. You do not believe that the disease is contagious?—Yes, I believe that it is contagious.

2155. But not so much as has been asserted?—Not so much as has been aserted.

2156. Do you not think that should the plague break out in 10 animals among 100 it would affect the lot?—I am not certain that those standing in the market would affect the whole lot; we have proof that they do not.

2157. What is your opinion of the origin of the disease?—It is impossible, I believe, for anyone to state the origin of the disease. I heard of the first case within a few day of its breaking out, and it broke out at first at Islington in a dairy. Professor Simonds told me that it was a disease which he had never seen, though he had seen the disease of the Rinderpest, I believe, in Russia.

2158. (*Viscount Cranborne.*) When did Professor Simonds make that statement to you?—I can hardly state the exact date, but it was a few days before the opening of the Royal Agricultural Show at Plymouth. I can give you the exact words of Professor Simonds, and I will give the Commission the reason why I asked the question of him. Last year I was connected very much in the trade with Mr. Hönck, who has been examined, I believe, before this Commission, and I felt rather an interest in it, knowing that the disease is always laid upon the foreign cattle, and when it broke out this year I saw Mr. Hönck, and I had heard Professor Simonds give a dreadful account of what the Rinderpest was. In June last I was told of this disease; then I asked the nature of it, and I could not learn. I was then told that Professor Simonds had been called in. I saw him in the market, and spoke to him about it, and I said to him, after telling him that it was a very bad disease, "Have you ever seen anything of the kind before," and he said "No, I have never seen anything like it."

2159. (*Mr. Read.*) Did he say in England?—He did not say in England. I did not ask him whether it was Rinderpest, but I asked him, "Did you ever see a disease like this before," and he said "No."

2160. Have you ever seen a disease like it before?—I have never seen the Rinderpest.

2161. Have you ever seen a disease like this?—No.

2162. You would consider it a new disease?—I should consider so.

2163. (*To Mr. Hicks.*) What is your opinion of the character of the disease?—That it must have been imported; it was unknown in this country up to some time in June. I believe it to be most contagious, and I have no doubt that the whole of this trouble has arisen from perhaps one or two solitary animals which have unfortunately come over with it; and I believe that it will affect the whole country;—it has done so.

2164. Do you think that it is the Russian Rinderpest?—I do.

2165. Do you not receive large supplies of dead meat from Scotland?—Yes, very large.

2166. Especially in the autumn and winter?—Yes.

2167. Would it be a greater hardship for the people of Birmingham to get their dead meat from London than for the Scotch people to send it there?—The Birmingham people do not get their large supply from London. I think that they get their principal supply from Ireland.

2168. We will say Plymouth or any large town?—Brighton, for instance, is almost entirely supplied from London at this time of the year, and the South Coast entirely at this time of the year.

2169. Take Brighton?—It would be a very serious inconvenience to them.

2170. I do not mean in the summer months, but say for three months in the autumn and the winter?—It would be a very serious inconvenience to them to carry the meat down there dead.

2171. Do you think that it would be judicious to stop all store markets and fairs for a time in the provinces?—In infected districts it would; it is a very serious thing. I think that they had better not be held there, but then it must not be evaded in other ways.

2172. In the case of the large importations of Irish cattle which we have in Norfolk at this season of the year, if you stopped the fairs in Norfolk, how do you suppose that they would be disposed of?—It would be useless to bring them; they could not be disposed of. The Norfolk men are afraid to buy them at the present time. I believe that Norfolk, at the present time, is in a very serious condition; with so much feed there, turnips in particular, they are afraid to put stock upon the land, and many of the farmers have no stock, and those who have bought them have killed them; but I think that a great many more have been killed than there has been any occasion for. For instance, if a farmer has the disease breaking out, the inspector perhaps compels him to kill his animals, and bury them; and I think that is a great waste. A farmer perhaps might have the option to kill or cure, but they should not be allowed to go off the farm. Inspectors have been called to see cattle, and have pronounced them to have the Rinderpest, and they have had them shot and buried.

2173. Do you know of a case of an inspector ordering any sound cattle to be shot?—No; but it is very difficult for them to discern between sound and unsound cattle. A case occurred a few weeks ago in our cattle market, where Mr. Tegg, our inspector, was told that there were some cattle ought to be seized; and I suggested that, instead of having the whole killed, two or three should be picked out, and we were all unanimous afterwards that they were all perfectly sound.

2174. What was the matter with them?—Nothing; probably they had been out all night. They were shivering with cold, and were dull about the eyes, but there was nothing wrong in the interior of them. We were all wrong.

2175. (*Dr. Playfair.*) You have said that it would be of great importance, in order to induce the farmers to be honest by making it to their interest to be so, that the Government should pay them for all cattle which died of disease?—Yes.

2176. Or would you limit the recommendation to the cattle slaughtered by order of the Government inspector?—It would amount to the same thing, because they would be slaughtered under the guidance of the Government inspector.

2177. Would you recommend payment for those which died naturally of disease?—Of this disease.

2178. Would not that, instead of inducing the country to be honest, produce an immense amount of dishonesty?—It would require a great supervision.

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and my recommendation would be, that a percentage should be paid, and not the whole value.

2179. Do you not think that as some kind of compensation might be desirable the safest plan would be to carry it out by mutual assurance, and not by the Government at all, by which means the interests of all the farmers would be involved in protecting themselves from any dishonesty?—But the great point which I should aim at in this compensation would be to bring out the grand secret where the disease is. I think that the money is quite subordinate to the question as to where the disease is.

2180. Could not it be done by mutual assurance as well as by the Government?—I do not think so.

2181. Are you not aware that in some countries there is a system of compulsory mutual assurance throughout the whole country?—I am not aware of it. Where a loss is sustained by this disease men endeavour to keep it secret, because it puts a ban upon themselves and their business, and the consequence is that they endeavour to get rid of the invisible portion of the disease, and their animals therefore contaminate all that they come in contact with.

2182. (*Chairman.*) With regard to the way in which you carry out your trade, do you keep any cattle yourself?—None.

2183. Are the cattle consigned to you from farmers or salesmen?—From persons of all classes who deal in cattle; farmers, graziers, dealers, and sometimes salesmen, who cannot sell them in the country markets. Perhaps a gentleman may send cattle to a particular market, with an order that if they do not make a certain price they shall go to London, and then they would come on.

2184. You have said that at this time of the year a great part of the southern towns in England are supplied with dead meat, instead of having cattle sent to them alive; is that dead meat consigned to you?—The county of Kent, and a portion of the south of England, is supplied from our Metropolitan Market.

2185. But in your line of business as a cattle salesman do any of those orders for meat come to you?—The dealers and butchers attend the cattle market, and buy some themselves according to where they suit themselves best; sometimes they deal with me, and sometimes they deal with others, according to where they find that the article suits them.

2186. Supposing that a stoppage of all movement of live cattle took place in the country, would it stop your business? Some witnesses have suggested a total stoppage of the movement of cattle, and that they should all be slaughtered either at the port where they arrive, or at the farm where they are grazed?—I think that that would be at variance with the summons which brings me here. I believe that it would be totally impracticable; it would be like commercial death; the supply and demand would be divided.

2187. Would it entirely destroy your business?—It might lessen it to a certain extent; but that would be a very minor consideration in opposition to the great question which we are met upon; it would be a question of pounds, shillings, and pence; and this is far beyond that.

2188. Would any business remain in your hands? Certainly; because the cattle which are sent to the continent would find their way there.

2189. I refer to cattle being sent as meat. The suggestion of some witnesses is that the animals should be slaughtered on the spot where they are grazed, or where they are landed?—I do not see that it would injure my trade in any way. I may perhaps explain that I have two trades: I am a cattle salesman, and I am also a dead meat salesman.

2190. (*Viscount Cranborne.*) It would leave you where you were?—Yes.

2191. (*Chairman.*) Are all salesmen connected with dead meat?—No; very few.

2192. How would it affect a person who was solely a salesman of live cattle?—It would shorten the supply generally; but still the cattle are sent to London by persons abroad and at home, to be sold without reference to their destination, and it is for the salesman to find a customer, and therefore the cattle would find their way to London; but if the country buyers were excluded the competition would be less, and the price lower, and the cattle would not make a remunerative price.

2193. Supposing that I had been in the habit of sending my cattle to you to be sold, and that an order was issued forbidding the movement of those cattle, would it not be probable that I should send to you to effect the sale of those cattle in the country to London butchers, supposing that I wished to send them to the London market instead of to a country market?—I think not.

2194. What would be the process?—The process would be that you would sell them at home to country buyers. I do not think that a London salesman could undertake to go to different farmers in different parts of the country; it would be so undefined, and he would make so many journeys for nothing, that I do not think that it would be carried out; they would all be sold in the country by the steward, or in the best way that they could.

2195. (*Dr. Playfair.*) Or sent up as dead meat?—Or sent up as dead meat.

2196. (*Chairman.*) Do you consider that the Metropolitan Market is one of the great means of transmitting the disease throughout the country?—I consider that it has been; what it may be I cannot say. You will find that whenever the disease has broken out in the cowsheds of London the cowkeepers have endeavoured to get rid of their stock, although apparently sound; they immediately send them off to the Metropolitan Market to be sold, and these cows are bought by many of the country jobbers to take into the country, because they are bought cheaper, and by the time that they get away the disease appears in them, and communicates itself right and left throughout the country, which is the cause of its having spread.

2197. And this is still going on?—As the cows die out there are fewer to remain behind, but the mischief has been done.

2198. You have alluded to a case at Aylesbury, where the cows were bought very recently?—Yes; either last Monday or last Monday week, and they have caused great danger and trouble.

2199. Was it before the last Order in Council was passed with regard to the slaughter in the market?—I should think that it was since; but the difficulty is this, a man may act bonâ fide, and yet be very far wrong, because an animal may not show the complaint in the market on Monday, although it may have it invisibly, and in the course of 48 hours it may break out, and perhaps may be transported 50 or 100 miles, into a different neighbourhood, and give it to a hitherto healthy district.

2200. Then with the views which you have, how would you check the spread of the disease from the Metropolitan Market?—That is a very difficult question. Isolation is the only effectual cure. I can use no other word.

2201. (*Viscount Cranborne.*) You do not propose to isolate London?—There is the difficulty; if I could do that I should have no trouble about it.

2202. (*Chairman.*) You have talked of pure isolation. When the disease has spread to more than 30 counties in England, how can there be isolation without stopping the movement of cattle all over England?—In this form: The only precaution to be adopted would be to isolate those animals which are affected and those which are in the company of those which are affected. If you can isolate upon a farm all the property of the proprietor, those of other proprietors which are sound can be moved with impunity. Owners immediately get rid of diseased stock, and the consequence is that they contaminate

everything that they meet with, and thus the disease spreads; but, if every person, when his stock has the disease, could have it isolated for a certain time, the disease must die out in his own hands, in the same way as a candle dies out in the socket.

2203. With those views have you thought how the matter could be properly carried out with regard to the isolation of infected districts, of course including the Metropolitan Market?—The Metropolitan Market is a stumbling-block which I cannot get over; but leaving this out, I think that the matter might be successfully combated, because, if A has a number of his stock affected he will be sure to endeavour to cure or to kill, and if he kills in the early stage it will not be a total loss; but he must not move his stock away from the farm where they are.

2204. (*Dr. Playfair.*) How would you prevent him from doing so?—By penal enactments.

2205. But have you not said that in the early stages nobody knows whether the stock is diseased or not?—In the incubation of the disease we cannot tell, but after it has broken out then it is visible, and those cattle who do not show it may have it invisibly. At the same time I should do a great deal in the way of compensation.

2206. (*Chairman.*) Do you consider the manner in which the Metropolitan Market is disinfected now sufficient?—I do not see what more they can do; they pour lime over the market.

2207. Do you believe that healthy cattle coming on to the Metropolitan Market might not take the disorder from standing on the ground where infected animals had previously been?—They would be more likely to take it from lying in the lairs.

2208. Do you believe that healthy animals can contract the disease by standing in the Metropolitan Market?—I believe that if healthy animals are at the lairs where unhealthy animals have left their saliva and filth they will catch it, or if they stand in the manure. I doubt whether it is in human power to disinfect the market effectually.

2209. Then in all probability the greater portion of animals coming to the Metropolitan Market may be infected with the disorder when they leave it?—A portion may.

2210. You have stated something important with regard to the lairs; will you state in what condition the lairs of London now are?—They are better than they used to be, because the Corporation of London have given more attention and labour to clean them out; but they have been very bad in former times.

2211. Are they under the supervision of the Corporation?—Yes.

2212. What do the lairs consist of?—They are covered buildings open at the sides, and with water troughs, and rails to put the hay in; and they are wooded up to the roofs in the middle, because they were bitterly cold, and it was done because the animals suffered so much from the night winds; but still those lairs for many years past have been a fertile source of the foot and mouth complaint.

2213. And you think that now they are a fertile source of the Rinderpest?—I think that there is no doubt about it.

2214. How would you cure this danger?—There is the difficulty. I think that many persons might offer advice which would be worth very little to you. I could not give any advice upon the point.

2215. Would you close the lairs for a time?—I do not know where you would take the cattle to, because other places would become the same where any cattle might be together in large numbers.

2216. Are not farmers rather afraid of sending their cattle to the market now, for fear they should not be sold, and then be seized by the inspectors?—I think not, the demand for cattle and for beef is equally large all over the country, and I think that at the present time they almost get a better price at many other places where there are not such large consignments of foreign cattle to compete with them.

2217. But I have understood that the graziers in the midland counties very recently were afraid of sending their stock to London for fear they should not be sold, and should return to them with the seeds of the infection in them?—Some might form that opinion; it is a question of price, or they might always be sold.

2218. You have stated that you have a large trade with Ireland?—Yes, from Dublin.

2219. What is the amount per week?—There are now very few cattle coming from Ireland; the senders have lost money by it, and have given it up; perhaps now there are 200 a week; last year there were 1,000 or 1,200. They send about 2,000 a week to Liverpool, the prices being better and the expenses less.

2220. Do they send from Ireland to England large quantities of lean cattle?—Yes; but not to London.

Mr. Brewster.—I think not, at present.

Mr. Hicks.—They do not come to London at all events. The probability is that a large number in the usual course of events would go to Norfolk and the grazing districts from Ireland, but not to London.

2221. (*To Mr. Brewster.*) You consider this disorder more serious than pleuro-pneumonia?—The results are shown more quickly; the animal dies sooner from it if it is not cured.

2222. Do you consider it as contagious as pleuro-pneumonia?—I should consider it more contagious than pleuro-pneumonia.

2223. You deal largely in sheep?—Yes.

2224. Are you at all afraid of the Rinderpest attacking sheep?—The only thing from which I can form any opinion is from the statement which has always been made, that it did not attack any other animal; that the Rinderpest would only attack the ox or cow; it is now stated that it attacks sheep; but I have seen no instance of it myself, and I almost question it, because I have seen sheep looking very much like it which have not had it.

2225. (*Viscount Cranborne.*) Can you give the name of the person who had the four cows cured?—Marcus Poole; he could be found in the Metropolitan Cattle Market; he is a very large consignor of stock to London, and he tried the experiment with these cows, believing it was cholera.

2226. (*Dr. Playfair.*) I suppose you are aware that there are always a certain number of cattle that survive the attack?—I believe so.

2227. But still would that isolated case of four cattle which you have mentioned influence you in regarding the disease as not a very fatal one, if in the large number of cases in the country 90 per cent. die?—If I knew that they died from that disease I should say that it was extremely fatal. If, in the case of animals in a country place in a good state of health, 90 per cent died, and only 50 per cent. in London, and if it was the first case of treatment, I should think that it was more curious still.

Mr. Hicks.—It would be important to remove all dairy farms from the metropolis; it has been a crying evil for many years.

2228. How far would you remove them?—Six miles.

2229. Do you consider them in a very bad state?—Yes; they are a public nuisance to the inhabitants. It is a beastly concern altogether.

2230. Are they badly drained?—Some of them are well drained, but some of them are beastly, and the whole course of producing milk is a beastly transaction. The cows stand for four or five years without moving out of the shed. All the offices of nature are done there, and it is a filthy concern.

2231. (*Mr. Read.*) What particular hardship would it be to kill all the cattle in London which are sent to the Metropolitan Market, for say the space of a month or six weeks?—There is no accommodation to do it; that would be a great hardship now. Last Monday week, Mr. Hollerton, of Plymouth, bought 150 beasts and 300 sheep for his contracts at Plymouth. If they were to be killed here the expense and the loss would be ruinous.

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2232. Why would it be so? Why would it be more impossible than killing cattle and sending them from Scotland?—There is no accommodation for killing them here; we have not now sufficient accommodation to slaughter cattle at the Cattle Market.

2233. Would it be a very serious thing to run up some slaughter-houses in the course of a fortnight, with wood and slate?—Sometimes more haste worse speed.

2234. Is not that the only way in which you could deal with the metropolis?—It would be a very effectual way.

2235. And surely for a month or six weeks it would not be such a great hardship?—There is the county of Kent. I should not like to commit myself to answering the question in the affirmative, though I should be glad if it could be carried out.

2236. There is no other way in which you think that it could be done?—I cannot answer that question.

2237. (*Chairman.*) The Commission will be very glad to hear any additional remarks to which you wish to draw their attention?—If anything further should strike me the Commission would probably allow me to communicate it in writing.

2238. (*To Mr. Brewster.*) Have you anything which you wish to add?—With regard to prohibiting passing along the roads, supposing that this dise se must be put out, that would be the only way in which you could do it. If you allow a man to send his cattle for a certain purpose to market you can never tell for what purpose they are sent to market. You could punish a man for sending them along the road, but it would be a very serious thing, it would be almost the last extremity, and would raise the price very much indeed, because each farmer would lose very much; he would lose the whole of the profit from the offal, and to a very great extent, it would very materially raise the price of meat. Then with regard to the importation of cattle from abroad, it would require long notice to get sufficient slaughter-houses at the port of disembarkation, and for a long while it would be almost impossible to do it, that is to say, for the next two or three months. A large supply now comes from abroad, larger perhaps than at any other time, and it would require a great space if you compelled those animals to be killed at the spot where they were landed. A great many of them go into the country towns to be killed, where they have no meat in their neighbourhood. The killing them at the port seems to me impossible; but it would appear to be almost the only effectual mode of accomplishing the object; it would, however, be almost one of the last things which I would do.

2239. Supposing that a sufficient number of slaughter-houses for the accommodation of sheep and cattle coming from abroad were afforded; do you believe that such a measure as that would stop foreigners sending cattle?—It would to a certain extent, because it is done upon a very small amount of profit. A great number of cattle come here from Germany; they come upon certain railways to a central point in the northern part of Germany, and from there the parties receive their orders whether they shall come on to Paris, to Brussels, to London, or to Lille, or other parts of the continent. If the price is a little dearer in Paris than in London they go there; if the price is a little dearer in Belgium than in London they go there; and it has this effect, that by a large amount of expense and loss being placed upon the cattle here it drives a larger number of them into those countries; for instance, in the neighbourhood of Lille and the large manufacturing districts of France and Belgium meat is reduced in price as restrictions are placed upon the importation of foreign cattle here, and therefore they get a great advantage from it, and they consume a large amount of meat.

2240. I understood you or Mr. Hicks to say that the measure of slaughtering upon the spot would have the effect of raising very much the price of meat in England?—It would raise the price of meat in England; but it would reduce the price to the man who sent it here, because his expenses would be larger, and his loss upon the minutiæ of the animal would be larger; the price to him would not be so large, though the consumers here would have to pay more money for the article.

2241. But if the price of meat was somewhat larger, it would be an attraction to him to send his cattle here rather than to Brussels or other continental towns?—The price of meat would be higher because of the amount of waste.

Mr. Hicks.—London would be overloaded with meat, while the country, which is usually supplied from London, would be denuded of it. A large portion is bought by jobbers, who take it to Ashford, and Canterbury, and Chichester, and other markets in the country, and sell it to small butchers. They meet the jobber, and buy the stock which he has bought in London.

2242. (*Mr. Read.*) (*To Mr. Brewster.*) You think that it would be preferable to kill cattle in London rather than at the outports?—Certainly; you stop importation very largely by killing them at the port of importation.

2243. Would it interfere very largely with the trade if you killed all foreign cattle in London?—Very materially.

2244. But not so much as if they were killed at the outports?—Yes; and it would not be of any advantage, because they do not come diseased.

Mr. Hicks.—I think that it would drive many of the buyers away from the London Market, and that many of the country buyers would not come to London, but would buy in the country.

2245. Supposing that there were no country markets, what would be the effect?—It is a very difficult question. The buyers must ride from farm to farm to find what they require, and waste half their time.

The witnesses withdrew.

Adjourned to to-morrow at 12 o'clock.

Saturday, 14th October 1865.

PRESENT:

Earl Spencer.	Dr. Quain.
Viscount Cranborne.	Dr. Parkes.
Mr. Lowe.	Mr. M'Clean.
Dr. Lyon Playfair.	Mr. Wormald.
Mr. Read.	Professor Spooner.

EARL SPENCER IN THE CHAIR.

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PROFESSOR BROWN further examined.

2246. (*Chairman.*) Will you state the staff which you have under you for the purpose of inspecting the metropolitan district?—There are 26 inspectors, appointed by the Privy Council, now engaged in different parts of the metropolitan district.

2247. Can you state whether they are veterinary surgeons in every case?—All the inspectors appointed by the Privy Council are members of the Royal College of Veterinary Surgeons, but there are other inspectors in the metropolitan district who are

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appointed by the magistrates; those are commonly not veterinary surgeons. I do not know that they are veterinary surgeons; some are butchers, and I believe that one or two are tradesmen. I think that one or two shoemakers are engaged as inspectors.

2248. Are they appointed by the Middlesex magistrates?—By the magistrates in different parts of the district.

2249. Without any knowledge of veterinary science at all?—Without any proper veterinary qualification.

2250. Are they under your supervision?—No; I have no particular cognizance of them, but only of those appointed by the Privy Council.

2251. Is any list furnished to the Privy Council of these inspectors appointed by the magistrates?—No, I think not.

2252. Are there any other inspectors besides these inspectors appointed by the Privy Council Office and by the magistrates?—There are the meat inspectors of the Metropolitan Market appointed by the Corporation, and some of them are also appointed inspectors under the Order in Council by the corporation; those are not under the cognizance of the Privy Council.

2253. Will you state what are the duties of the inspectors appointed by the Privy Council Office?—Their duty is to attend in the first place at any shed from which notice of the presence of the disease may be sent. They are also required to attend wherever they have reason to suspect the presence of the disease, and having found it, to be present, it is their duty to report to the veterinary department all the particulars relating to the outbreak. They are also required to instruct the owner in the proper course to pursue. Any animals which they consider dangerous to the neighbourhood, or likely to spread the disease in any direction, they are authorized to cause to be destroyed, buried, or otherwise properly disposed of, according to circumstances. In the event of the owner desiring it, they are authorized to give a certificate which shall enable him to take away all the animals which are not suffering from the disease, but which have been exposed to the infection, to the nearest slaughter-house, in order that they may be slaughtered by the butcher, and dressed for human food. It is the inspector's duty also to prevent the removal of any animals, either diseased or infected (that is to say, having been associated with diseased animals,) to any public market, or to allow them to be travelled along any public road; those are the principal duties.

2254. Is the metropolitan district mapped out to each of these inspectors?—Yes; it is mapped out, but not in a very exact way; it was found excessively difficult to arrange it.

2255. Can you give any idea of the number of cowsheds which come under the superintendence of one inspector?—There is one inspector now acting for St. Pancras and St. Marylebone, and in the parish of St. Pancras there are 99 cowsheds, and in Marylebone 69, or nearly about that number; it is his duty to take cognizance of the whole of those sheds.

2256. Is he able to do that business thoroughly?—The person who is now holding that office is able to do so, as he has nothing else to do. He was a veterinary surgeon not practising at the time of his appointment, and he devotes his whole attention to it.

2257. How does he obtain information with regard to disease in any of the cowsheds?—He goes round to every shed. I instructed him to do so, in order that we might get the fullest information from that quarter.

2258. How often do you suppose that he visits each shed?—That depends upon circumstances. If the disease has broken out, he contrives, if possible, to pay a visit to that shed once a day, or once every other day, according to the urgency of the case. If all the animals are healthy, he probably would pay a visit two or three times a week, in order that he might be able to mark when the disease first appeared.

2259. Do you think that he can sufficiently carry on his inspection?—I think that in this particular case he can, having no practice to attend to.

2260. Are there any cases where there is not a sufficient staff to carry on the inspection thoroughly?—I am clear that there are cases where the inspection is not efficiently carried out. In the district of Willesden, for example, which lies between two inspectors, one at Paddington and one at Stanmore, there have been complaints which have recently reached us as to the inspection not being efficient; There are eight or nine large cowkeepers whose names I have just had given to me from that district, and it is stated that the inspector has not visited this place, or only very occasionally; there is no one appointed for that particular district.

2261. Do you know the number of sheds which that inspector has under his supervision?—The one at Paddington has the whole of the Paddington parish, and I think that there are between 30 and 40 cowsheds there. The one at Stanmore has a very large district, confined entirely to the country division, that is to say, that his inspection would refer particularly to farms. He has to travel considerable distances. I do not think that it would be possible for either of those gentlemen efficiently to inspect the whole of the country which lies between them.

2262. You have spoken of the inspectors appointed by the magistrates; how do their duties differ from those of the inspectors appointed by the Government?—In no way; their duties are exactly the same, and some of them send returns to this department.

2263. Do they generally co-operate with the inspectors appointed by the Privy Council?—I am afraid not. I think that they are rather opposed to them.

2264. Have the Privy Council inspectors any authority over these local inspectors?—They have no authority over them, but as far as the Privy Council is concerned they would take precedence of them. In the event of there being a question as to which inspector should give the necessary directions, the directions given by the inspector appointed by the Privy Council would take action irrespective of the inspector appointed by the magistrates.

2265. Have you heard any complaints of the manner in which these inspectors do their work?—At different times we have heard statements made to the effect that unqualified men were acting as inspectors, and that persons owning valuable stock objected to allow these men to give an opinion or to submit to their dictation when they ordered animals to be destroyed.

2266. Do you know anything of the district of Highgate?—I have been a great deal over that district.

2267. A gentleman whom we had before us yesterday, Mr. Gebhardt, has a farm of valuable pedigree stock there; are you aware of that?—I do not know Mr. Gebhardt's farm at Highgate.

2268. Do you know the inspector appointed by the magistrates there?—No; there is an inspector there appointed by the Privy Council; I know him.

2269. Are there any other sanitary officers belonging to parishes, or any other officers, who assist you in carrying on the inspection in the metropolis?—The sanitary officers appointed by the medical officers have to inspect the cowsheds, and in some cases they co-operate with the inspectors appointed by the Privy Council; in other cases they appear to me to be opposed to them. In many cases I should say that the Government inspectors do not co-operate with the sanitary inspectors.

2270. To what class do the sanitary inspectors belong?—They are not usually professional men, and it is difficult to say precisely from what class they are drawn, but they are looked upon more in the light of parochial officers than scientific men.

2271. What are the duties of the sanitary inspec-

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tors ?—Their duties in reference to the cowsheds are to make regular inspections, and to report as to the general character of the management, the drainage, the ventilation, the cleanliness of the establishment, and the general condition of the animals which they find there.

2272. To whom do they report ?—I presume that they report to the medical officer.

2273. Does your inspection extend to the lairs ?—Those are under the inspection of Mr. Tegg in the market, but I visit them frequently.

2274. Do the inspectors of markets and the inspectors of districts co-operate ?—Yes, generally. I should say decidedly so.

2275. When you were first appointed, in what condition did you find the cowsheds in the metropolis? —I found many of them in a very filthy condition, and in some of them, where the hygienic conditions were least attended to, the animals remained healthy, but in others they suffered in common with those which were kept in better conducted establishments.

2276. Have you any idea of the number of cows which have died in the metropolis ?—The returns which are at present made up state that there have been between 9,000 and 10,000 throughout the country ; but my own idea would be that there have been something like 4,000 or 5,000 animals lost to the metropolitan district alone.

2277. Do you know what the total number of cows ordinarily kept in the metropolis is ?—I do not, exactly.

2278. Have the precautions which have been taken with respect to cowsheds had any beneficial results ? —The grand result has been to cause those places to be emptied wherever the disease has broken out. All the animals which have not been affected have been sent away by the owners, and either sold or slaughtered.

2279. At the present time are there a large number of cows in the metropolitan cowsheds ?—No ; there is a very sensible diminution ; but I do not find that in those which still remain occupied by cows there is any great improvement in the sanitary regulations. It is very difficult to get the owners of those places to attend to any directions, even when they are not attended with any expense to themselves.

2280. Are not these metropolitan cowsheds all under licence ?—Yes, they are.

2281. To whom do the proprietors apply for their licences ?—I believe to the magistrates of the district or parish.

2282. Have there been many licences refused lately on account of the unhealthy state of the cowsheds ?—As far as I know, there is only one man who is to be opposed at present, but it is probable that when further evidence is obtained there will be several who will have their licences refused.

2283. Whose business is it to oppose these licences? —It is the business of the sanitary inspector, assisted by the Government inspector, if he has any evidence.

2284. In the metropolitan district was there not considerable difficulty in carrying out the order of the Privy Council with regard to burying carcases ? —Yes ; it was quite impossible.

2285. What became of the bodies ?—They were all taken into the knackers and horse slaughterers, principally some three or four which have establishments near the Islington Market, at a place called Belle Isle ; the principal part of them were taken there, and carried through the streets in open carts.

2286. What became of them when they reached Belle Isle ?—Those which are in tolerably good condition are skinned, and the flesh is boiled for cats and dogs to eat ; the hides are sent away without any attempt at disinfection. When the flesh is not fit to be used for dogs' meat, it is sometimes buried, when a person has premises which will enable him so to dispose of it ; if not, it is boiled down to a species of pulp, made into a kind of soup, and then run down the sewers.

2287. Is that a safe thing to do ?—No ; it is very unsafe indeed ; it is very objectionable in every way.

2288. Do you consider that the disease has been spread a good deal by this manner of making away with the dead bodies ?—I think that in all probability, from the entire want of precaution in the disposal of the hides, and also in the removal of the manure which has been sent into the country from the slaughter-yards, without being disinfected, the disease has been spread by those means.

2289. But under the orders of the Privy Council is there not power to bring the law into operation in this respect ?—On the owner's premises, but not otherwise.

2290. Can he remove them without being subject to a penalty ?—Yes ; there is nothing to prevent it ; but there is an Order in Council to compel disinfection previously. We are sending out instructions to the inspectors to see it done.

2291. I thought that it was necessary to have the superintendence of an inspector, if you were removing animals belonging to an infected herd. And the same with regard to the carcases ?—It is so, but practically inspectors have not ordered animals to be disinfected previous to removal.

2292. The fact is that the law has not been put into force, although there are powers to do it ?—The powers of the inspector would justify him in ordering carcases to be disinfected ; but there is no Order in Council making it imperative upon him to do so; it would be a private act of his own.

2293. I see that the 10th section of the order in Council of 22d of September is—"Every inspector "shall have power within his district to seize and "slaughter, or cause to be seized and slaughtered, "and to be buried, as hereafter directed, in any "convenient place, any animal labouring under the said "disorder." And the 11th section is, "Every in- "spector shall have power within his district to "cause to be cleansed and disinfected, in any manner "which he may think proper, any premises in which "animals labouring under the said disorder have been "or may be, and to cause to be disinfected, and if "necessary destroyed, any fodder, manure, or refuse "matter which he may deem likely to propagate the "said disorder. And every owner or occupier of "such premises shall obey any order given by such "inspector for that purpose ?"—Yes.

2294. Is not that carried out in practice ?—It is not carried out practically to any extent.

2295. Can you state why not ?—I am not enabled to answer that question. With reference to the destruction of manure, I believe that it would be altogether impracticable in the London cowsheds ; it must be taken away.

2296. Section 15. is, "No person in any district "for which an inspector has been appointed shall, "without the licence of the inspector, send or bring "to or from market, or remove from his land or "premises, any animal which has been in the same "shed or stable, or has been in the same herd or "flock, or has been in contact with any animal "labouring under the said disorder ?"—That has not been carried out ; in the first place, in consequence of the persons not giving notice; and, secondly, from the fact of their very frequently getting the animals away in the middle of the night, when they could only have been stopped by the police, who have only lately been asked to afford their assistance in preventing these things; that is to say, after nearly all the cowsheds have been emptied.*

2297. There is an important section, the 17th : "All animals having died of the said disorder, or "having been slaughtered on account thereof, shall "be buried with their skins, and with a sufficient "quantity of quick lime or other disinfectant, as "soon as practicable, and shall be covered with at "least five feet of earth, or shall, in districts for "which an inspector has been appointed, with the "consent of the owner, be otherwise disposed of "in manner directed by the inspector." You have

* *See* Note on 2319.

stated that dead animals were removed without the knowledge of the inspector; that therefore would be contrary to this section?—Decidedly.

2298. Do you think that it is practicable to carry out this order more efficiently?—I have no doubt that by having a larger staff of inspectors, and exercising a rigid superintendence, the Order in Council might be carried out out more perfectly.

2299. (*Viscount Cranborne.*) Can you give me any reason why shoemakers are selected for the purpose of inspection?—No; I do not know any reason why they should be.

2300. Is it supposed on the part of the magistrates that there is any fitness in the trade of shoemaking for the duty of inspection?—I should think not.

2301. Then do you imagine that the fact of shoemakers having been appointed is the result of pure accident?—It would probably be the result of their having been recommended by some persons who considered them to be judges of diseased cattle.

2302. Do you know what the process is through which benches of magistrates go in appointing an inspector; do they require certificates or testimonials of any sort?—I cannot give any information upon that subject, because the appointments have taken place without the knowledge of the Privy Council or of the veterinary department, and they appear to have been made without reference to the Order in Council, which does not seem to authorize it, excepting out of the limits of the metropolitan district.

2303. Out of what fund are the inspectors paid?—It is not settled whether they shall be paid by the local authority who appoints them or by the Treasury.

2304. Has anybody been paid yet?—None of the inspectors have yet been paid.

2305. Do you know at all on what authority the magistrates appoint them. Is it only under the Order in Council, or is there any statute giving that authority?—I do not believe that there is any statute giving that authority, because these inspectors are only appointed upon this occasion under the Order in Council.

2306. For what period have these local inspectors been in office; for how many weeks?—I think that they have been in office something like ten weeks. I think that the earliest appointments by the magistrates in the metropolitan district were something like two months or ten weeks since.

2307. Has no kind of controversy arisen between the inspectors and their employers upon the subject of payment?—I have not heard of any.

2308. You do not know whether any list of inspectors thus appointed is rendered to any department of the Government?—I am not aware of there being a list.

2309. Has your attention been called to the 6th section of the Order in Council of the 22d of September, which runs as follows: "Every inspector shall "from time to time report to the local authority by "which he is appointed the steps taken by him for "carrying into effect the regulations prescribed by "this order; and the local authority shall certify, "in such manner as may be directed by one of Her "Majesty's Principal Secretaries of State, the number "of days that such inspector has actually been "engaged in the performance of his duty, and the "number of miles travelled by him while thus "engaged?" Do you know whether any directions have been issued by either of Her Majesty's Principal Secretaries of State in conformity with that section?—I do not; I only know that we consider that to apply to inspectors appointed out of the metropolitan district, but we have had one such return sent in (probably by mistake) to the veterinary department. The return merely incloses the inspector's account; it states nothing in reference to the steps which he has taken to carry out the Order in Council.

2310. The 7th section of the order is, "Every "inspector shall furnish the Lords of the Council "with such information in regard to the said "disorder as their Lordships may from time to "time, require." Have their Lordships required anything?—I am not aware.

2311. What is your ground for the opinion which you say is entertained that the words "local authority" under this order do not include any local authority situated within the metropolitan district?—I read the words to that effect in the second clause relating to the appointment of inspectors by the Clerk of the Council.

2312. Will you find me the words to which you refer?—It is in clause 2 of the Consolidated Order. The first extension of the order to the rest of England included that clause referring to the appointment by the magistrates.

2313. The magistrates at all events appear to have formed a different construction of the order from that which you have formed, and have themselves appointed inspectors?—Precisely.

2314. Have they done it all over the metropolitan district?—Only in some four or five instances which I have heard of; but we have no means of knowing, except from accidental information. There has been no return to this department of the number of inspectors appointed by local authorities.

2315. Nor any report of what those inspectors have done?—Only in one or two cases.

2316. Do you not occasionally receive complaints from parties as to the action of these inspectors?—One or two complaints have been made, generally in the course of conversation, but we have had no special complaints made to the department.

2317. Supposing that any policy of isolating places where the disease has broken out was to be undertaken, by drawing a sanitary cordon round the place infected, are there, in your opinion, a sufficient number of qualified inspectors to carry out that policy for all the places which are now affected with this disorder?—I am perfectly certain that there are not a sufficient number.

2318. And without a certain number of duly qualified persons such a policy could not be efficiently carried out?—I believe not.

2319. What was the date at which the police were requested to give aid to the inspectors in the supervision of the cattle sheds?—I believe about three weeks ago.*

2320. Which was considerably after the period of the greatest prevalence of the plague in London, was it not?—It was certainly considerably after that period.

2321. (*Dr. Parkes.*) I understood you to say that the 11th section of the consolidated order, which refers to the disinfection of premises, has been practically disregarded?—To a very great extent it has. The disinfection which is carried out in places where it is attempted at all amounts to a sprinkling of the floors and stalls with a little chloride of lime, or a little of M'Dougal's powder.

2322. No special instructions have been issued upon that point from any of the authorities of the Privy Council?—Instructions have been sent from our department, and further directions are about to be given.

2323. Then in all probability the recommendation which is given to the inspector to use any disinfectant which he pleases will be repealed?—The disinfectant which is to be employed by the inspector is chloride of lime. He is to receive instructions to buy a sufficient supply, and to employ a man to carry out the disinfection properly; and I have received instructions to employ a person to disinfect the slaughter-houses in the metropolitan district, and to see that he does his duty.

2324. Can you refer to any decided instances of the disease having been conveyed by manure?—We have no positive evidence of it, but complaints have been brought from different parts of the country where the disease has broken out, that the manure coming from the London sheds has not been disin-

* The witness subsequently stated that he was mistaken. The date was the 24th August.

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fected, and occasionaly a portion of the skin or the leg of a cow has been taken up in the act of removing the manure from the barges.

2325. In those cases did the local authorities attribute the breaking out of the disease to the manure ?—I believe that they did.

2326. In how many instances has that occurred ? —I have heard complaints some four or five times.

2327. Is the evidence satisfactory to your mind that the disease was really conveyed in that manner ? —No ; but the proceeding was nevertheless objectionable ; it clearly gave rise to suspicion.

2328. (*Mr. Read.*) I suppose that the justices generally appoint a qualified veterinary practitioner as inspector, if they can ?—I think that is probably the case.

3329. And if there is not one they appoint a shoemaker, or some other man who knows as little about stock?—Anybody that they can ; but that would not apply to the metropolitan district, where one would think that they could always obtain a veterinary surgeon.

2330. Do you say that there are no inspectors' returns sent to your department regularly every week ?—Not from those inspectors who are appointed by the magistrates in the metropolitan district, but in the counties all those who have been regularly appointed out of the metropolitan districts send in their returns, and they are under the same supervision as the returns received from the inspectors in the metropolitan district ; they are received in the department in the same way.

2331. If a carcase of a diseased cow has to be removed previous to burial, would it not be just as well to make artificial manure of it as to sell it for cats' meat, or to pour the soup from it down the sewers ?—There is no doubt that it would be much better to make artificial manure of the carcase, or to convert it into some other commercial product ; but the objection is that there are no chemical works at present established on a sufficiently extensive scale to allow of the reception of these animals.

2332. One would think that the sulphuric acid which is used in the manufacture of manure would totally destroy the seeds of the disease ?—There is no doubt that it would ; but in order that it should be properly applied it would be necessary that the animal should be cut up, and on making inquiries of those persons who used diseased meat, and bad meat, which they buy from the markets for manure, and for other commercial purposes, I have ascertained that they buy those portions of meat in joints which are conveniently arranged for at once being thrown into the boilers. It was stated to me that it would not be worth the while of the chemical manufacturers to take diseased cattle, and to employ men to cut them up before they could be placed in their boilers, as now arranged. They also stated that they would not like to employ their ordinary men, who are quite unaccustomed to such a process, for the purpose. Those chemical manufacturers who were in a position to make a contract on a large scale required a guarantee from the Government against the loss of any capital which they might expend, and they further required 1*l.* to be paid for each carcase from any part of the metropolitan district ; that contract the Government declined to accept.

2333. Then the artificial manure makers were not inclined to receive the carcases of the dead cows ?—The only artificial manure maker who would receive them was Mr. Odam, at the Isle of Dogs. He took a contract with the Government, engaging to pay something for the carcases, but a statement was made to the effect that the manure so obtained was likely to convey the infection over the country, and Mr. Odam immediately gave up the contract on the plea that it would injure his business.

2334. I suppose that that opinion was an erroneous one as to its possibility ?—In my opinion it was, but it was a general one ; the Lords of the Council certainly entertained it.

2335. Is it your opinion that making artificial manure would be greatly preferable to the present practice ? — Decidedly ; by the use of proper appliances, which are well known to those manufacturers, by which means it would not only remain perfectly harmless, but would be very valuable as a manure.

2336. Is it your opinion that the metropolitan dairies are a fruitful source of disease at other times besides the present ?—The animals there commonly suffer a great deal from foot and mouth disease, and also from pleuro-pneumonia.

2337. In your opinion ought they to be abolished ? —I have no hesitation in stating that that is my opinion ; that the time has come for it.

2338. (*Dr. Playfair.*) You have said that the manure in the metropolitan district is not disinfected ?—No ; not generally.

2339. You are no doubt aware that that manure contains all the highly contagious matter which runs from the nose and eyes of the animals ?—Yes.

2340. Are you also aware that that matter is ascertained to be contagious by inoculation ?—Yes.

2341. Do you not therefore think it very likely to be an extremely fertile source of distributing the disease throughout the country, by allowing such manure to go without being disinfected ?—I think that when the manure is removed in a fresh or recent condition from the sheds, and taken to short distances, it is likely to be the means of conveying the disease to other parts of the country ; but I do not think that when it has been kept for a considerable period, some eight or ten days, which it commonly is, it is likely to be so injurious.

2342. Are you aware that such matter has been kept for four or five months, and has been found equally infectious ?—I am not aware that this virus from animals suffering from the Cattle Plague has.

2343. You do not know of experiments on the continent where it has been kept for several months, 18, I believe, and has been found equally injurious at the end ?—I was not aware of those experiments.

2344. (*Mr. Read.*) Are there any statistics to prove the mortality of cows in the London cowhouses, previous to the outbreak of the plague ?— I am not aware of there being any statistics, but the fact is that they would be in the hands of the sanitary inspectors ; the veterinary surgeons have rarely or never visited London dairies, except under the present circumstances.

2345. The mortality would be very great ?—I really have no idea what it is ; the veterinary profession is seldom consulted at all by the owners of dairies. I do not think that I ever went into half-a-dozen cowsheds in London in my life, until the Cattle Plague broke out.

2346. (*Chairman.*) I see that you state that you know of some cases where some animals from infected sheds have been sent to the Metropolitan Market and elsewhere ?—Yes.

2347. Will you state some actual cases ?—I have an account of one man in Marylebone, who had 148 cows in five sheds in one yard, all adjoining. Of those animals 32 were killed or seized, he states, by which I conclude that some of them went to the market, and were seized there as diseased ones ; he states that 32 were killed or seized, and 104, I believe, sent away. He gives no information as to what became of them, and I presume that he does not know, they were sent to the market and were sold.

2348. And of course they were spread about in various parts of London and the country ?—Decidedly so.

2349. Have you any case in the country which you have traced up to London ?—I may refer to a case which I visited the day before yesterday in Hampshire, where the disease has broken out, and where one animal out of a herd of 19 was affected. As soon as it was ascertained that the animal was suffering from the disease, 15 of the herd were sold

to a butcher, and were sent up, it is presumed, to the Metropolitan Market. This was done, I am informed, under the sanction of a lawyer, who stated to the owner, who inquired whether he was justified in so doing, that as there was no inspector in the district he was not under the Order in Council at all.

2350. Can you trace that case up to a London dairy?—No. This happening under the last Order in Council, if the animals got into the Metropolitan Market they would be marked for slaughter; they are not allowed to be sold there for any other purpose. These were fat oxen, and the probability is that they would be shortly afterwards slaughtered, but they would be in railway trucks, and would go by road to the Metropolitan Market from the station, and if the disease was among them they would carry the infection.

2351. Can you state what system of inspection there is in rural districts?—So far as my observation has extended in the rural districts, the inspection is conducted in very much the same manner as it is in the metropolitan districts.

2352. (*Viscount Cranborne.*) By shoemakers?—No; I am speaking now of the properly appointed inspectors.

2353. (*Chairman.*) Are there two classes of inspectors in the country, those appointed by the Privy Council, and those appointed by the local authorities?—No; there are none in the country appointed by the Privy Council. Outside of the metropolitan district they are appointed by the local authorities. A great many of them are not members of the college, but what are commonly termed cow-leeches or farriers.

2354. Do you believe that those are competent people to act as inspectors?—I think that generally they are competent to act as inspectors, for the detection of the Cattle Plague; but I do not think that they are the men who ought to be intrusted with carrying out the Orders in Council, for the reason that their object is to increase their income by treating cases, instead of taking strict measures for the purpose of destroying infected animals, and preventing the spread of the disease.

2355. Would there be a sufficient number of properly authorized veterinary surgeons in the country to act as inspectors?—No; there are not a sufficient number.

2356. You have mentioned a case in Hampshire; was there in that case any inspector in the district?—There was a veterinary surgeon in the district, but he was not appointed until after those animals were sent away,—the same day.

2357. Are there many districts in the country where there are no inspectors?—I do not know of any districts where the disease exists in which there are not inspectors.

2358. Does it not generally happen in the country that the inspectors of markets and of districts are the same person?—It is very commonly the case.

2359. You have formed some opinion as to the inspection of fairs and markets and wharves, have you not?—Yes.

2360. Will you state it to the Commission?—With reference to the inspection of wharves and landing places generally, I am of opinion that so far as regards the extension of a contagious disease it is altogether useless; because no amount of knowledge is sufficient to enable a man to detect a disease in the incubative stage, when no evidence of it is expressed by external symptoms, and for the further reason that those inspections are generally conducted very loosely, the animals being merely driven from the landing place, and allowed to pass by the inspector, there being usually no convenience for the collection of a great number of them for a long time, and for such a time as would be required for the positive examination of every animal, and for the further reason that the fee allowed would be insufficient to remunerate the inspector for the trouble of examining individually every animal, in a cargo perhaps amounting to some hundreds. For the whole cargo he receives 10*s.* 6*d.*

2361. We have been told that the inspections at the ports, in which I suppose you include the wharves to which you allude, have been exceedingly severe lately?—They have been much more vigilant since the outbreak of the Cattle Plague, especially from the endeavour to detect instances of that disease; but the same argument applies there, that it is impossible for them to detect the disease in the incubative stage. I would make the same statement with reference to fairs and markets, and I should give as an illustration the inspection of Barnet Fair, which was conducted very carefully. I had a staff of inspectors for the purpose. I had the assistance of the mounted police, and a large body of men on foot. I had slaughtermen standing at the different roads ready to take charge of any animals which might be seized, and I had arrangements for burying any number of them which might be passed up to the fair. One result of the inspection was that a large number of them were not brought to the fairs at all, the owners of them forming private fairs some miles distant. We found dead animals in the fields some 10 or 12 miles from Barnet. The second result was, that all the diseased animals, which otherwise might have been brought up, and would have been detected when they were in the fair, were kept back, and animals which had probably been associated with them, or which had passed through infected districts, were brought to the fair, the inspectors not being able to detect that there was anything the matter. It was generally remarked that the stock in the fair was particularly healthy. I have since received intelligence of five or six outbreaks of the disease among animals which had been brought in lots from that fair, which was so rigidly inspected.

2362. Can you state in what part of the country the outbreak has been traced to Barnet Fair?—I do not precisely recollect in what parts, but in various directions, radiating from that point.

2363. It is a fair in which graziers and butchers buy from all parts of England, is it not?—Decidedly so.

2364. And you are now speaking of a place where the inspection was as efficient as you could make it?—As it was possible to be.

2365. What remedy would you suggest instead of inspection?—I see no remedy beyond stopping the fairs and markets altogether; that is what I should have advised instead of inspection.

2366. You would stop markets for butchers' meat as well as fairs for graziers of bullocks?—Not if the animals could be brought to the market with a clean bill of health, supposing that they had not come through infected districts, and that they had been in a healthy condition for a fortnight past; but I should only permit those animals to be sold to butchers on the authority of the market inspector, with his certificate, on the understanding that that certificate should be returned to him on his application, after the animals had been slaughtered.

2367. Supposing that this was carried out would you require a certificate before the animal actually left the farm where it was grazed?—Certainly.

2368. Would you forbid all movement of cattle until a certificate was given by an authority in the district that the cattle upon a certain farm in the district were free from infection, and therefore might be moved from the farm?—Decidedly so.

2369. Would you allow any to be taken away after having been a fortnight on a farm?—Any of them which came from perfectly healthy districts, and which were certified to have been in a state of health for at least the last 14 days, I should allow to be taken away.

2370. We had evidence yesterday from a gentleman who told us that he believed that healthy animals, perfectly free from the infection, would very likely catch the disorder from standing in the Metropolitan Market, though it was disinfected; might not that be

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the case in the country districts, where animals with a clean bill of health are exposed for sale?—Yes, if they had previously allowed infected animals to stand there; but in the event of this proposition being carried out infected animals could not be brought to market at all.

2371. What would you do with markets where infected animals had been in large numbers?—I should order them to be thoroughly disinfected before any other animals were put there.

2372. Do you believe that you could do that so effectually as to prevent contagion?—I think so.

2373. What would you do with regard to foreign cattle?—The only possible course that I see with reference to foreign cattle is to have them slaughtered on landing; that is to say, animals coming from infected districts, and to have them sent up in the form of butchers' meat.

2374. Do you think that such a course would be practicable at the ports of disembarkation?—I think that practically it would prevent importation to a great extent; but I am also of opinion that it would lead to the selection on the part of the importers of animals which were fit for the butchers only, and that store stock would not be sent over.

2375. But that would affect the value of the animal; they would not get so much for them if slaughtered at the landing-place as if sold in the Metropolitan Market?—They would not, certainly.

2376. (*Dr. Playfair.*) Do you know the case of W. Jones, who carried 124 beasts to the Barnet Market and to Barnet Fair, and lost the whole of them afterwards?—I have not heard of that case.

2377. Do you know the case of John Jones, who carried 73 head of Welch beasts to Barnet Fair, and lost the whole of them after passing through the fair?—I have not heard of any names of the owners of cattle in these cases. I have merely heard of certain cases where the disease has broken out. The Welch Fair was held some miles from Barnet.

2378. (*Mr. M'Clean.*) Did the local authorities pay for the inspection of Barnet Market?—No; nothing has been paid for the inspection of Barnet, but I understand that it is not to be paid by the local authorities. They applied to the Government, and the Government directed me to organize a system of inspection.

2379. (*Mr. Read.*) Could you trace the outbreak in Hampshire?—No; we could get no evidence of the disease nearer than Farnham, which was nine miles from the place where this herd was affected; but the evidence which I gained was not satisfactory, and I instructed the inspector to examine the whole of the district, and to report at once.

2380. As a matter of course, a great number of men are appointed inspectors who are not qualified in any way for their office?—I believe there are.

2381. Do you not think that a great deal of very wholesome meat has been destroyed by order of the inspectors?—The inspectors acting under the Order in Council are obliged to condemn all animals which have the disease, however slight the indication of it may be; but from the evidence which I have obtained from examinations of animals which have been apparently healthy I am quite clear on this one point that there are many animals condemned as unfit for human food in the early stage of the disease which present no further evidence of it internally than is presented by other animals which have been with infected ones, but which show in themselves no external indications of it, yet are suffering from it in the incubative stage.

2382. And those carcases would be fit for human food?—Those are legally fit for human food. I may state that from nine carcases which I condemned a few days ago, in consequence of finding that the animals had the disease, the men about the place were engaged in cutting off steaks, and taking them away, while the inspector was under my directions destroying the rest of the carcases. The meat looked perfectly healthy.

2383. Do you think that it is judicious to invest in some of these inspectors the power to go into a man's herd and order his bullocks to be slaughtered, without any compensation?—I do not know whether I should be justified in giving an opinion upon that subject. It is a power given by the Lords of the Privy Council.

2384. As there are a great number of incompetent inspectors, do you not think that it would be well to have one professional man in a county, as the chief or head inspector?—I think that it would be well to do so, if a man sufficiently competent could be found in each district or each county.

2385. No general order has been issued that the rural police are to assist the inspectors?—I believe not.*

2386. Do you think that their assistance would be very efficacious?—I have no doubt it would.

2387. The payment of 10*s.* 6*d.* for examining a cargo of cattle is as a matter of course very inadequate?—Entirely so.

2388. Have you not known a great number of inspectors refuse the appointment?—I have known inspectors refuse the appointment.

2389. And consequently a man of an inferior stamp has been appointed?—Decidedly.

2390. (*Viscount Cranborne.*) I understand you to say that you would have no objection to allow cattle to go up with a clean bill of health to a market, and then to be sent back to a grazier?—I have no objection to that course.

2391. Is it your opinion that a market can be so thoroughly disinfected that the subtle poison of the disease will not lodge in any part of it?—I think that if we used the proper measures it might be so disinfected, presuming that diseased animals were not again allowed to be brought there.

2392. I understood you in the earlier part of your evidence to say that in your opinion it was impossible for any person to tell an infected animal in the incubative stages of the disease?—I believe it to be impossible.

2393. It would be quite possible while the disease was incubating to obtain a clean bill of health in the district where the animal lived, and by the time it reached London the disease might come out?—Not if the bill of health referred to the state of health of the animal in the last fortnight, and to the fact of there being no disease in the district, unless the animal became infected on the road, and I do not think that then, during the incubative stage at that early period, any infection would be transmitted.

2394. Do you think that the cattle trucks on the railways are not capable of conveying infection?—I have no doubt that they are capable of conveying infection.

2395. Do you believe that with such efficient superintendence as could be instituted you could, with confidence, say that they had all been disinfected?—It would require a very elaborate and expensive machinery to carry out any such system properly.

2696. But without such a system the conveyance of cattle would always be dangerous?—Decidedly.

2397. A clean bill of health such as you suggest implies a competent inspector to give it?—Decidedly.

2398. And you have said that there are not a sufficient number of competent inspectors to exercise a superintendence over the whole of the country?—There are not.

2399. I conclude that your recommendation of permitting cattle to leave a market for the purposes of slaughter only refers to a condition of things far more favourable for ascertaining the existence of disease than exists among us at present?—Precisely. Then I may be allowed to state that I should only authorize their being removed to the nearest market.

2400. After the testimony of Lord Sydney, and the cases which you yourself witnessed in Norfolk, I suppose you are not prepared entirely to deny the possibility of infection in a train from animals feeding

* Subsequently corrected by the witness. An order had been issued to that effect.

by the roadside ?—I think it is highly probable that animals feeding by the roadside would convey the infection to others which were situated at some distance from them.

2401. Is it not the case that animals in the meadows might infect animals travelling by a train, especially at stations where they stopped, or when they were going slowly ?—I think it quite possible that they would do so.

2402. (*Mr. Read.*) Is it your opinion that it is better to abolish all fairs and markets for store stock for a time, but that fat stock might be sold in market as usual ?—That is my opinion, decidedly.

2403. Under certain restrictions which you have named ?—Yes ; it should be ascertained that they were slaughtered.

2404. Have you any means of supposing whether it would be possible to slaughter all the cattle in London which came into it ?—It would not be possible to slaughter all the animals which came into the Metropolitan Market in its slaughter-houses.

2405. But I say in London ?—It would be quite possible in London.

2406. (*Chairman.*) Since you were examined the other day, have any cases come to your notice in which there has been any difficulty in tracing the origin of the disease, in a district where there has been no disease before ?—The case which I have alluded to, which occurred the day before yesterday, in Hampshire, is the most marked one that I have met with lately.

2407. In what part of Hampshire was it ?—At a place called Bonham near Alton, and the nearest disease reported is at Farnham ; but I think it highly probable that the disease exists at other parts, because the inspector was not quite certain as to the nature of the disease, and for that reason I was sent down to decide the question. Now that he is acquainted with it I have advised him to make a close inspection round the whole of the country, and to report as early as possible.

2408. We have a return before us of the number of animals attacked by the disease in different counties and districts in England, and the number killed, the number which have died, and the number which have recovered. In what way did you obtain this information ?—It was sent by the inspectors principally, and occasionally from the superintendents of police. In a few instances we have had reports from the superintendents.

2409. Have all the local authorities who I imagine are acting under the Home Office had orders from the Home Office to send in reports of cases in their districts ?—I am not aware that they have had any orders to that effect.*

2410. Do you believe that this is a complete list of the cases which have occurred first of all in the metropolis ?—No ; I do not consider that all the cases of disease have been reported to us.

2411. How do the inspectors who have sent in returns obtain them ?—They obtain them by making inquiries of the owners of those sheds where the disease has occurred, and they frequently do not obtain any information at all, or have any suspscion of the disease having been present, until all the animals have been removed.

2412. Do you believe that it very often happens that a large number of animals have the disease, and die without notice of it coming to the inspectors ?—I am perfectly certain of the fact that it is so, and has been so from the first.

2313. It is in fact the interest of these people to keep secret what has occurred in their dairy or farm ?—Decidedly.

2414. Does that equally apply to the country as to the metropolis ?—I think it does.

2415. Then this return is worth very little ?—I am afraid that that there is a great deal yet to be added to it, from the statement which I heard of the total number of deaths, 9,000 or 10,000. I believe that it does not represent the loss which the country has sustained.

2416. This return would only show a small number of the deaths which have occurred ?—I am afraid that the number is very nearly double.

2417. (*Professor Spooner.*) You have said that the greater number of animals have died before the inspector has had any information ; do you mean that they have died, or that they have been sent away and slaughtered ?—A great many of them have been sent away and slaughtered. The animals are very frequently all gone before the inspector receives notice.

2418. (*Chairman.*) I see that in Middlesex the return of the animals which have been killed and died is 1,727 ; have you reason to believe that that is erroneous ?—I am aware myself of some 600 or 700 animals which have died or have been killed.

2419. Do you believe that 1,700 would represent the number which have died or have been killed in consequence of the disease in the metropolis ?—No ; I do not think that it is likely that I should have cognizance personally of nearly half the number or one third of the number.

2420. (*Viscount Cranborne.*) I suppose that it is very often very difficult for the person himself to say whether all the animals which have been killed have been killed entirely on account of the cattle disease. There must always be a large number which are killed from mixed motives ?—In reference to the dairymen, I think that there is no difficulty, because they would not send their cows to be killed unless from such fear.

2421. But in case of beasts, would there not always be a doubt ?—Not generally, because they would not send any beasts to be killed as a rule until they were perfectly fit for the butcher, or until the markets were in a favourable state ; so that if they were sent away in large numbers at unusual times it would be fair to conclude that they were so sent in consequence of the fear of loss from the Cattle Plague.

2422. What motive has a farmer to return the number of deaths to the inspector ; does it bring him any sort of advantage ?—Not at all ; there is no motive for it.

2423. Then these returns only represent those case where the farmers have done it out of pure public spirit ?—In answer to questions put by the inspector ; he has no means of compelling them to give information.

2424. How is the inspector induced to put any question ?—He commences by inquiring how many animals are usually kept upon the farm or in the shed.

2425. Do you mean to say that the inspectors have made an inspection of the whole country upon that principle ?—Yes.

2426. Have they inquired at every farm in the country ?—No ; only where they have known or supposed the disease to be present.

2427. Then in order for the inspector to give a true return it is first necessary that intelligence of the disease shall have reached him ; and, secondly, that the farmer shall be inclined to give a true and complete return ?—Certainly.

2428. (*Mr. Read.*) You would think that the return which you have sent in would be more correct as regards the provinces than as regards the city, would you not ?—I think it most likely that it would be so, because it is difficult to keep the disease secret in the country.

2429. And a great number of the cows in the London dairies were got rid of, I believe, before inspectors were appointed at all ?—I apprehend not a great number, because inspectors were appointed as early as the end of July, I think before the end of July, and notices were sent round. The first intimation which the cowkeepers had, I believe, of the presence of the disease, was in the notice sent by the Privy Council, and the effect of that notice was to cause the emptying of a great many sheds.

* The Home Office had in fact issued such orders.

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2430. We have had it in evidence that very early in July as many as 200 diseased cows were in the Metropolitan Market; that would be before the appointment of any inspectors, would it not?—Yes.

2431. I think it was the 10th of July. I suppose that a great many of these so-called spontaneous outbreaks, when they are thoroughly investigated, show some evidence of their having arisen from contagion?—I have not the slightest doubt that in every case contagion has been at work, but in a great many cases it is very difficult to trace direct contagion.

2432. But you very frequently have the means of proving contagion after an examination of the facts of the case?—Very frequently; and always in reference to the outbreak of the disease over a large extent of country. In a county, for example, you can always trace it; but it is difficult to trace it from the original centre.

2433. But has it not a new centre in Hampshire?—Farnham is close to it; it is within nine miles. It has been for some time at Winchester.

2434. (*Dr. Playfair.*) I think you said that the mortality was 9,000 or 10,000; it is almost exactly 12,000, namely, 5,000 and 7,000?—I believe it to be far beyond that number.

2435. (*Professor Spooner.*) That is to say, the number which have died or have been killed?—Yes.

2436. (*Mr. Wormald.*) What proportion of those animals which have been slaughtered have really been attacked by this disease?—I think that a very large proportion have had the disease, at least in the incubative stage, because the rule has been to send them away in small droves, as they became attacked. If one cow showed indications of the disease by the loss of milk, those which were fit to be sent to the butcher would be picked out and sent away, and then the shed would be kept in good condition until another was attacked.

2437. But you cannot say what proportion have been sent away which have not been attacked by the disease at all?—No.

2438. If an animal has been under the care of a veterinary surgeon, and the medicines which he has given have been rather powerful as regards their scent, and the animal has been slaughtered, supposing that that medicine has passed through the animal, can a butcher ascertain that the animal has taken medicine?—No, certainly not; I do not think that that is possible.

2439. I have had it stated to me by butchers that they could ascertain that fact, and that it deteriorates the value of the animal if it has taken those strong-smelling medicines?—I should have thought it altogether impossible, and in the course of the post-mortem examinations which I have made I never yet detected the scent of any medicine; in fact there are few medicines which one uses possessing a scent which would be sufficiently strong to overpower the smell of the carcase which was being dissected.

The witness withdrew.

Adjourned to Monday next at 12 o'clock.

Monday, 16th October 1865.

PRESENT:

Earl Spencer.	Dr. Quain.
Viscount Cranborne.	Mr. Read.
Mr. Lowe.	Dr. Parkes.
Dr. Lyon Playfair.	Mr. Ceely.
Dr. Bence Jones.	Professor Spooner.

EARL SPENCER IN THE CHAIR.

Mr. William Simmonds examined.

Mr. W. Simmonds.
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2440. (*Chairman.*) You are inspector of cattle under the Custom House of the port of London?—Yes.

2441. Are you a veterinary surgeon?—Yes; I have been inspector of cattle for 21 years next March.

2442. Will you state what the ordinary character of your duty is?—To inspect all cattle, sheep, and pigs which arrive in the port of London, for infectious or contagious disease.

2443. Are no cattle allowed to be landed without a certificate from you?—They are all allowed to be landed, and they undergo my examination afterwards.

2444. Are you able to carry out a detailed examination of all the cargoes which arrive?—Yes.

2445. Have you any assistants?—Yes; there are two stations in the port of London, the upper and the lower. Mr. Holmans is at the upper station, and I am at the lower, and I have also my own assistant, Mr. Moss.

2446. About what number of cattle have you to inspect a day?—A great quantity at times. On Saturday and Sunday last there were nine vessels which arrived at two wharves, namely, Brown's and Brunswick Wharf. In those nine vessels there were 2,989 beasts, 5,464 sheep, and 324 pigs. Of course it took me the whole of the day. They were perfectly healthy, and with the exception of perhaps now and then one or two being with a broken leg, or bruised, or being suffocated, there was no disease.

2447. Have you ever discovered any cases of diseased animals arriving by foreign ships?—Within what time?

2448. Since the beginning of May?—Only by one vessel, the "Maas" from Rotterdam. She arrived, I think, on the 6th of September at Brown's Wharf at Blackwall.

2449. Will you state the circumstances of that case?—I happened to be there previously to the whole being landed. I should say that there were about 50 beasts at the time, and there was one cow which I saw with the Cattle Plague. That cow was immediately slaughtered; a post-mortem examination was made, and traces of the disease were perfectly shown. This was one of three cows surreptitiously put on board, as I imagined, without being either on the manifest or on the bill of lading; the two cows and a third cow were kept separate from the other cargo. The importers asked the question: What time of quarantine would be required? The answer was, 10 or 12 days. They thought that that was too long, and I suppose that, being satisfied that there was the disease in the one cow which was slaughtered and condemned, they made up their minds, and killed the whole of the cargo, with the exception of the two cows, and a cow which was with calf.

2450. From what port did this cargo come?—From Rotterdam.

2451. What was the date of its arrival in London?—The 6th of September; that was the first cargo from Rotterdam. In 12 days afterwards one of those cows was taken with the disease, and slaughtered

in the last stage. A few days after that the other cow was taken bad, and having the disease slightly, recovered. She was kept for the proper time of quarantine, and ordered to be delivered. The cow which was in calf calved about seven or eight days after she landed. She was taken with the disease about 12 or 13 days afterwards, and died, and also the calf, showing that the whole of the animals which were kept alive suffered from the disease. The whole cargo was 292.

2452. (*Mr. Read.*) You say that one animal recovered from the disease?—Yes; there is no doubt that she had the disease.

2453. (*Chairman.*) What became of that cow which had the disease and recovered?—She was delivered up to the General Steam Navigation Company, and I believe has been sold in the market this day.

2454. How long after she recovered from the disease was she delivered up?—She was kept from the 6th of September up to yesterday; she was sent away yesterday.

2455. Do you know the time which elapsed between her complete recovery and the time when she was sold?—I reported to the Commissioners last Monday that she was perfectly healthy and fit to be delivered. I should say that she came back to her food, and the secretions of milk, at least ten days previous to that.

2456. Ten days previous to the time when she was sold?—Yes.

2457. Where do you keep the animals which you detain?—On the wharf in lairs and pens.

2458. Are they perfectly separate from the places where stock congregate?—Yes.

2459. Is that the only case which you have had?—That is the only case which we have had from Rotterdam or any other place as far as regards the port of London.

2460. I see a case mentioned in the report from the Custom House of a steamer from Malmo; do you remember that case?—Yes. The Commissioners gave me orders to go down and inspect these animals which were detained; I inspected those cattle, and detected no disease whatever, with the exception of foot and tongue disease. The inspector, I think Mr. Wheeler, said that he had had one or two animals killed which were diseased, therefore I could not see them amongst them, because carbolic acid and lime were applied to them, and they were buried. I advised the Commissioners to keep those animals in quarantine for ten or twelve days, and if they were perfectly free from infectious or contagious disease to deliver them. There were 186 sheep in that case, and I found no disease with them, and I thought that it would be advisable to dip them in some disinfecting fluid such as chloride of lime or any fluid which they would like to have, and then deliver them.

2461. This case was not immediately under your own inspection?—No; it was another inspector altogether.

2462. Where was it?—At Thames Haven, some nine miles, I think, from Gravesend.

2463. Who was the inspector at Thames Haven?—Mr. Wheeler.

2464. Was he a veterinary surgeon?—Yes.

2465. Then as you had no evidence that there was Cattle Plague among this cargo you had the animals kept for a certain time, and when they showed no signs of the disease you allowed them to be delivered?—I advised the Commissioners to deliver them, which was done.

2466. There was another case which has come before us, which was the case of some Dutch cattle which were consigned by a Mr. Defries to his son in London; do you remember that case?—I remember seeing the cattle. I have at all times to attend at the wharves; on the Sunday and every day. I saw some 23 beasts tied on the wharf where my examination generally goes on. I have an officer attached to me from the Customs to attend to my orders, and I immediately said to this officer, "Those "animals have exzema and fever, and I will have "them immediately slaughtered." He said, "I beg "your pardon, they are going for export." I said, "Then I have no control over them."

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2467. Can you state the date of that occurrence?—I think that it was on Sunday the 2d of July.

2468. Were you able to trace the history of those animals before that day?—Only by what the son told me; that he was commissioned by his father not to sell them under a certain price; he had taken them into the market three or four times, and they were turned out unsold. They were in Nichols's lairs; and of course being in Nichols's lairs, and the first place where the disease broke out, I naturally thought it very likely that they might have got the infection there.

2469. Do you know what became of them after you saw them?—They went away to Rotterdam; I saw them go.

2470. Did you hear whether they had the Cattle Plague?—Yes; I myself believe that the Dutch people may thank Mr. Defries for taking the disease there.

2471. You have not heard of the existence of the Rinderpest in Holland before that date?—Certainly not.

2472. From what countries do most of the foreign cattle come?—Rotterdam, Germany, Tonning, Denmark, Oporto, Spain, latterly from Boulogne in France, and Gottenburg; there are a great quantity from Gottenburg now.

2473. Is there any mode of inspection at these foreign ports of the cattle sent to England?—I believe so; I see many veterinary inspectors' certificates, but I take no notice of them myself.

2474. There is no bill of health shown you when the cattle arrive in England?—I see the inspector's certificate, but I take no notice of it, because there is often found disease of another character which has broken out, and I have had occasion to stop animals which have received a veterinary surgeon's certificate.

2475. Do you believe it possible that animals which you have inspected have had the seeds of the disease in them, and have spread it where they have gone?—I think it quite possible that they have had the seeds of the disease in them.

2476. In the early stages of the disease?—In the incubative stage, and not discernible.

2477. As far as your experience goes, the species of inspection at ports is no guarantee to this country that the Rinderpest will not be introduced by foreign cattle?—I think that we should detect disease if the animals came from a diseased district, such as from Russia. I think that the animals would be bought two or three days previous to the exportation, and that we should have them 10 or 12 days on the journey, and perhaps more than that, so that I think that we should be able to detect the disease.

2478. You would not be able to detect it if they came from Holland?—No; unless they had the symptoms, because it is only some 20 hours' passage.

2479. Have you any supervision of other Custom House inspectors at different ports in the kingdom?—Only when called upon by the Commissioners. They generally send me down to the different ports.

2480. Have you been sent down to Hull?—Yes; four or five years ago.

2481. You have not investigated the Revel case?—Not at all.

2482. A suggestion has been made that foreign cattle, instead of being sent alive to the Metropolitan and other markets, should be slaughtered at the port of landing, and the meat sold. Have you considered that point?—I think that that would altogether prohibit cattle coming from foreign countries to England.

2483. Why do you think so?—I think that by having the cattle slaughtered there the parties would

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lose so much money by them that they would not think it worth their while to send them.

2484. Would they be detained as long as they are now, supposing they were slaughtered on the spot?—We have only had one or two cargoes detained since I have been appointed in London, with the cattle plague or the typhus fever. If another cargo was detained, I think that the parties would leave off sending them.

2485. At present I suppose there is no accommodation at the landing-places for the slaughter of cattle?—Yes; at my station there is plenty of such accommodation.

2486. To any large extent for the purpose which I have mentioned?—Yes; at Brown's Wharf I should think that they could kill from 150 to 160 cattle a day. There is one slaughter-house there.

2487. We have heard that the foreign trade in cattle is a very delicate one; that cattle are brought to a certain point in North Germany, where those who have charge of them receive directions as to whether they shall proceed to Paris or London, according to the price of meat in those places. It is rather supposed that the price of meat would rise here if any measures checking the circulation of cattle were adopted. Would not that attract foreign cattle?—I think not; I think that most of the foreign animals come to the port of London. It is only in a few instances that you find that the Harwich people try to get the trade to Harwich, and it seems that when the animals come there it is only a few cargoes; the port of London has the preference.

2488. The suggestion has been made that there should be a market for foreign cattle, with accommodation for slaughtering them on the spot, at Blackwall?—I am of opinion that it would stop the importation.

2489. Is the trade in foreign cattle confined to the east part of London, or is it pretty general?—I think that the greatest quantity of foreign cattle for butchers are slaughtered in the east and west parts of London. Many of those beasts are fit for the west as well as for the east; they are of good quality.

2490. (*Viscount Cranborne.*) How many assistants have you?—I have only my own. The one appointed by the Board is not an assistant, but is the same as I am myself. Mr. Holmans is appointed at the upper station and myself at the lower station.

2491. You said that during two days last week about 8,000 animals had come in; did you inspect all those beasts?—No; there were three of us; myself, Mr. Holmans, and Mr. Moss.

2492. How many working hours in a day are there at this season of the year?—From daylight till dark; from 6 o'clock till about 5 now. In summer time from 3 o'clock in the morning till 9 or 10 at night.

2493. Do you inspect each animal separately—? We endeavour to get to the vessel while the animals are being landed, and we go through the examination as they pass along; we then have them all tied up, the beasts in particular, and the sheep and calves in their proper place; we then go through them again, and have them all led out one by one.

2494. Supposing it was ordered that no animals which were brought to the Metropolitan Market should leave it again, but that all brought there must be slaughtered in London. I suppose that that would not have any injurious effect upon importation?—Not to the Metropolitan Market, because they would be sold there previously to being slaughtered.

2495. Are many animals brought in like those of Mr. Defries, with the intention of being sent back again if a certain price is not obtained?—Certainly not. I think that it is the fault of the salesman in allowing them to be sent out of the market without being sold. I should think that he would sell them for the best price, as he must know that if they are sent out of the market a second time they will generally lose value.

2496. Where do the cattle land in the port of London?—They are landed at Fresh Wharf, Brewer's Quay, St. Katherine's Steam Wharf, the Dublin Wharf, the Aberdeen Wharf, Brown's Wharf at Blackwall, and the Brunswick Wharf.

2497. Is the mass of the importation of cattle to the port of London?—Yes.

2498. By far the greater quantity?—Yes.

2499. If the importation were confined to the port of London do you think that it would injuriously diminish the import to this country?—I think not. I think that last year there were about 500,000 in the port of London to 200,000 in other places. Of course I cannot give that correctly.

2500. (*Dr. Parkes.*) Referring to the case of the cargo which arrived upon the 6th of September, and the cows which were taken ill, can you give us the dates definitely how long the cows were taken ill after exposure?—I think that on the twelfth day afterwards symptoms of the disease were shown. On the thirteenth day there were decided symptoms; on the 14th day there were the second and last stage.

2501. What was the length of time at which the symptoms appeared after the last exposure to the chance of infection?—It would be about the twelfth day; it was about twelve days before the symptoms were shown.

2502. That was as to one of the animals. What was the time as regards the next one?—Somewhere about the same time.

2503. And how was it as respects the cow which calved?—She calved down within some four or five days after she landed, and I think that it went on for about 20 days; it was 20 days from the time of the first infection.

2504. They were mixed together?—Yes; and she went on extremely well for many days.

2505. We cannot draw any conclusion in those cases as to the time of incubation?—I think not.

2506. What are the early stages of the disease?—We find dulness and loss of appetite, and coldness of the horns and extremities, and separating themselves from the others.

2507. Would those symptoms be distinctive in this disease; are they not common to many other diseases?—Yes; but then we find other symptoms come on rapidly afterwards. Those symptoms which I have mentioned would not warrant me in stopping the whole cargo. I should have the symptoms thoroughly developed.

2508. If the animal merely presented those symptoms, what would you do?—I should detain the whole cargo for six or seven hours, if I saw any symptoms of disease.

2509. What is the first positive symptom upon which you think it your duty to detain the whole cargo?—The first symptoms would be the lapping of the ears, quickness of breathing, coldness of the extremities and of the horns, and leaving off chewing the cud; and in the cows the secretions.

2510. Those would not be very early symptoms?—No.

2511. Did I rightly understand you to say that you and your assistants inspected in the two days 8,000 cattle?—More than that.

2512. How much time do you give to each animal? I employ from daylight till dark. Yesterday we had seven vessels up, and we were there from half past six in the morning till half past four in the afternoon.

2513. Then you must inspect several animals in the course of a minute?—Yes.

2514. Then how could you detect symptoms?—From the general appearance of the animal.

2515. Your inspection must of course be extremely imperfect?—I think not. If the animals come from a diseased district,—if they come from Rotterdam, where we have had disease, I should take longer time; but in other cases we of course do it superficially.

2516. What is the general condition of the vessels?—Very good; they are thoroughly cleansed every voyage; they are washed, and disinfectants are employed.

2517. What disinfectants ?—I think that some of them use chloride of lime ; others use chloride of zinc.

2518. Do you think that the animals are well treated on board ?—I think very well ; they are sometimes a little over-crowded.

2519. When you have been on board you have seen nothing objectionable ?—Nothing at all.

2520. When you have gone down between decks before the animals have been landed, has the air been extremely close ?—If they are lying out at anchor, or at the buoy, for any length of time, the air becomes very close, so that it is advisable to unload them directly on getting alongside the wharves.

2521. Is it very hot and disagreeable ?—Sometimes particularly so.

2522. So much so that you have any difficulty in going in ?—Great difficulty at times, when they have been lying out in the river for some time.

2523. The air has been very bad ?—The air has been very bad sometimes in some vessels, and the others are not so bad.

2524. What is the length of the voyage from Oporto ?—I think about five days ; sometimes longer.

2525. And from Tonning ?—36 to 40 hours.

2526. And from German ports ?—About the same time, if they are quick vessels.

2527. (*Mr. Read.*) On board all these cattle ships are there plenty of means of carrying water ?—No ; only in tanks.

2528. Do you suppose that there are proper supplies of water ?—I think that the long passage steamers from Hamburg, Tonning, Spain, and Oporto all carry water.

2529. You think so ?—I am sure of it. From Rotterdam, Boulogne, and Ostend I do not believe that they do.

2530. How often do they water the animals coming from Oporto in five days ?—Twice a day. They have drovers with them.

2531. In rough weather is it not impossible to water cattle ?—I think not.

2532. You have said that a quantity of cattle came in yesterday bruised, and some with their legs broken, and some smothered ?—Two, I think, were smothered.

2533. Is that of common occurrence ?—Yes, when over-crowded.

2534. From being over-crowded, or from rough weather on the passage ?—I rather think that it was from the passage, because they were so many hours after their time ; they were 12 or 15 hours longer on their passage.

2535. I suppose that you take no notice when vessels are over-crowded ; it is not part of your duty? —It is not part of my duty, but I do take notice of it, and sometimes I complain of it ; and I think that we can generally tell from the way in which the cattle come in ; they come in far better when they are not over-crowded than when they are over-crowded ; the mortality is less.

2536. Do you not think that it would be desirable to have a regulation that a certain space should be allowed for each bullock ?—I think so. I am now trying to gain that space. I have gone round to most of the shipowners.

2537. What do you call fair space ?—It is according to the size of the animal ; for large cattle we require somewhere about two feet in width, and for smaller cattle about one foot nine inches.

2538. Of course they would be packed as tight as apples are packed in a basket ?—They ought to be packed close, and more particularly in the winter time. When we expect heavy gales, or windy weather, the cattle are packed so that they cannot lie down, and they come over much better. The drover always has to be down in the hold, so that when an animal gets down he may get him up as soon as possible.

2539. How many cargoes have you stopped in the last seven or eight years ?—I have stopped several cargoes with exzema. Last year, in the House of Commons they wished to be a little more lenient, and they only ordered us to take away the unhealthy from the healthy, and to deliver the healthy, and have the others killed ; but there were several small cargoes with exzema.

2540. Why do you stop them ?—Because it is a contagious disease, and when we do have them we have them very bad ; with the feet off.

2541. With the claws off ?—Yes.

2542. Then they have had some considerable drift as well as the voyage ?—No ; I think that they are shipped in a diseased state, and the parties are satisfied at times to have them slaughtered.

2543. (*Professor Spooner.*) You have stated, in answer to Dr. Parkes, with regard to the earliest stages, certain symptoms ; might not those symptoms show themselves in other diseases ?—Yes.

2544. So that by the observance of those symptoms now you only conclude that it is a case of Cattle Plague in consequence of the prevalence of that disease ?—I think not ; I do not say that. I think that when we have these symptoms themselves of the Cattle Plague it is very discernible to the eye of a veterinary surgeon ; but as to fever, such as the opening of the mouth and the running of the eye, and the discharge from the mouth and nostril, we should have decided symptoms of the disease.

2545. But those are not the earliest symptoms ?— Of course not ; but if I found symptoms of any fever, or of any contagious nature, I should detain those animals until I was satisfied.

2546. But in fact there is nothing special in the earliest symptoms which you have named ?—Nothing.

2547. They may show themselves in any other disease ?—Yes.

2548. From the period which you have named as regards the incubative stage of the disease I presume that numbers of cattle may come over to this country, and may be affected with the disease in that stage, and you may not discover it at all ?—Yes.

2549. It may show itself one or two days afterwards ?—Yes. If the voyage was only 20 hours, and another voyage would be ten or twelve days, I consider that we should not have the facility of finding out the disease in the lesser time as we should in the greater time.

2550. Therefore you would admit that your inspection cannot be effectual upon that point ?—I think that it has been effectual, because, supposing that the Cattle Plague was in Rotterdam or in any other place, with the exception of Russia, it is proved positively that our inspection is of a sufficient character.

2551. In enumerating the primary symptoms you have said nothing about the evacuations ; what have you to say with respect to them ?—In my experience that occurs invariably in the last stages ; that is in the way of dysentery.

2552. Take the alvine evacuations in the earliest stages ; does not the animal give any evidence of the disease by an alteration of its evacuations ; is there not constipation ?—There is constipation in the first stage of the disease and in the second stage. In the last stages we have diarrhœa or dysentery.

2553. Do you find that the animal evacuates its fæces more frequently than in its healthy or normal condition, and that there is a smaller quantity ?— Undoubtedly.

2554. And is it more consistent ; more tending to constipation ?—Yes ; up to the first and second stage ; in the third and last stage I think dysentery ensues.

2555. Have you made any observation as to the pulse of the animal under these circumstances ?—We find that the pulse is quickened and of an inflammatory character.

2556. Of course you have observed as to the normal pulse of the cow. As a rule at what would you average the pulse of a healthy cow ?—I think that it is somewhere about 45 to 50 ; it is different from a horse ; it is about 38 to 40 in a horse.

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2557. Have you frequently examined as to the pulse of a cow after the animal has been disembarked, and become quiet, and is not under excitement?—Do you mean when having the disease?

2558. Yes?—No, I have not.

2559. But you say that when affected with the disease you have examined the pulse, and have found it quickened?—Yes; but in the last stage I have not, because then I have not cared to touch the animal in any shape.

2560. You have not said anything with regard to the state of the skin as a primary state of this disease?—We find the coat turning. At times we find emphysema, but not at all times.

2561. As regards the temperature of the skin; what is it?—There is coldness all along the spine.

2562. (*Dr. Playfair.*) With all the care and watchfulness which you have now added to the inspection from the fear of the disease, do you think that it is sufficient to prevent diseased cattle entering the country?—I think so.

2563. Are you aware that five Dutch beasts with the plague were seized in the market this morning? No.

2564. One freshly imported this morning, and four which had been in the previous market?—Of course I cannot be accountable for those which had been in the previous market; but I myself have not examined any from Rotterdam this morning.

2565. But they would be examined by your assistants?—No; they may be examined at Harwich or Thames Haven.

2566. But they entered the country in a diseased state?—Yes; but they might have been here some days, and have been turned out in a field, or have come up in an infected truck.* We kept the beasts from the "Maas" on the 6th September, before they were all killed, they also kept the beasts at Harwich, in quarantine, some 14 of them, and no disease showed itself. I consider that from Rotterdam we are perfectly safe from the disease; that arises partly from their examination and partly from the law of the country, that they shall not allow anything to go near where the disease has broken out.

2567. When you saw Mr. Defries's oxen infected you ordered them to be slaughtered?—Yes; because I saw exzema, and also fever.

2568. You suspected the plague?—I did.

2569. Did the Board of Customs telegraph to Holland to say that a cargo of diseased animals were going over to them?—No; because I never told the Commissioners of Customs of it.

2570. But do you not think it very desirable for one country to protect another from the importation of diseased oxen?—Yes; because I think that exports ought to be protected as well as imports.

2571. But you have at present no authority to examine exports?—Not at all.

2572. (*Mr. Lowe.*) I understand you to think that inspection affords sufficient security for the non-introduction of this plague from foreign animals?—I think so.

2573. Can you really say that upon the importation of so many thousand animals in a day you can give a sufficient inspection so as to be pretty sure that none of them have the disease?—Yes; I have done so for the last 21 years, and I believe it to be a matter of impossibility to be stricter than I am.

2574. You think it sufficient?—Yes.

2575. Bearing in mind that the presence of a single diseased animal may have the most dreadful consequences?—If the disease is in the system of course you cannot see it; but where there is no disease I think that the examination is perfect.

2576. Against the disease in its incubating stage the examination is utterly powerless?—Certainly.

2577. And therefore we must not rely upon it to get protection against that; but in its advanced stages you think that it is a full protection?—Yes; we have power to detain until we are perfectly satisfied. I have many times detained animals for six or 12 or 24 hours, and sometimes for two or three days, until I was perfectly satisfied that they were in a healthy state.

2578. How many beasts pass you in a minute?—Not one, I should think.

2579. In the case to which you have referred, how many beasts did you inspect in a single day?—8,000 odd in two days; but then there were three of us. There were 2,989 beasts, 5,464 sheep, and 324 pigs. The beasts are larger in magnitude, and some of the sheep are merinos, and the merinos are turned on their backs, and it takes a little more time.

2580. How many hours did it take you to inspect those 8,000 odd animals?—We began yesterday morning at half past seven, and I was there until nearly dusk; from half past seven till about half past four.

2581. That is nine hours?—Yes.

2582. The time on both days was 18 hours?—Yes, about that time. It takes two or three hours to land them, and then we see them gradually go through our hands, and we then walk round them. If I examined horses I could examine two or three in a very little while.

2583. How many of you do this?—Three of us.

2584. Is the attention of all three directed to the same animal at the same time?—No; perhaps my assistant might be at one place, and I might be at another. They are tied up, and they are sorted, and you may go through beasts and sheep perhaps twenty times in the period. Each bullock, and each sheep, and each pig, and each calf has marks, and they are sorted by the drover, so that perhaps an animal passes our eyes two or three times.

2585. So that each of you would have to inspect about 150 in an hour?—Yes.

2586. And you think that that can be done?—Yes.

2587. But you said just now that you took a minute to each animal; was that confined to the beasts?—We can pass sheep much quicker than we can bullocks.

2588. You think that you and your two assistants, working at the rate of two a minute, can fairly inspect so as to insure the public against this pest, and that that is a sufficient precaution?—I think so.

2589. Do you consider that your assistants are as trustworthy as yourself?—I believe so. I have no reason to say to the contrary.

2590. You said that you had sent a beast back which had been ill, and recovered?—It was kept for the proper time of quarantine, and before the quarantine was out it was taken ill with the disease, and got well.

2591. What is the time in which the disease ceases to be contagious where an animal has had it?—I should say some 10 or 12 days afterwards.

2592. How do you get that information?—By my own opinion.

2593. Are you a veterinary surgeon?—I am.

2594. Upon what is that opinion based?—Upon my knowledge of other animals in the country.

2595. With this disease?—With this particular disease. I have seen some hundreds in the country.

2596. Has there not been rather a short time to form an opinion upon the subject?—I think not; several of the animals have been cured. I believe that nature has done the most.

2597. It is a question not of curing, but of giving the disease to other animals?—If an animal recovered from the disease I should certainly think it fit to be delivered in 10 or 12 days after the subsidence of

* The witness subsequently furnished a statement from the salesman to the effect that these beasts had been landed at Harwich, and had been 12 days in London, and stood twice in the market.

the disease, after being thoroughly cleansed, and being kept away from the unhealthy ones.

2598. Is that the general opinion of the profession?—I cannot say.

2599. Is it not a very important point?—Yes.

2600. You have not had any consultation or advice upon the subject?—Only my own advice in the case of the cattle which I have attended with the disease.

2601. You say that if we required the foreign cattle to be slaughtered in the market where they were sold, it would prohibit the importation?—Not in the market; if they were sold in the market, and then killed, well and good; but if you compel the foreigners to kill upon the spot where they land, I think that the result will be to prohibit the importation of the cattle.

2602. Suppose that at Blackwall or any other suitable place upon the Thames where the foreign cattle were landed, a market was held, it being provided that they should be killed before leaving, what would be the result?—I think that it would prohibit their being imported.

2603. Why?—Because they like a public market.

2604. Would not it be a public market?—I think that they like to have the home animals and the foreign animals together; the foreigners would rather keep their cattle separate from the home cattle, and have a market such as the Metropolitan Market, one part for the foreign cattle and the other part for the home cattle; but by detaining them, and having them killed at the place of landing, I think that it would prohibit the importation.

2605. If there were two markets, one for the foreign cattle and the other for the home cattle, it being provided in both that the cattle should never leave alive, do you think that it would stop the importation?—Yes; I think that they would not like two separate markets, keeping the foreign cattle away from the home cattle.

2606. What would be the effect of it?—Very great.

2607. It would raise the price of meat to the public?—Yes; to a great extent.

2608. That is because the present price of meat would not pay the foreigner?—I rather think that it would interfere with the foreigner. He would say, "I bring cattle here, and have not the same privileges "as others in the market; but let us sell fairly both "foreign and home cattle in the same market."

2609. Do you think that if all cattle instantly upon entering the London market were to be killed it would affect the foreign trade; both home and foreign beasts being obliged to be killed?—I think that there would be no objection to that; I think that the foreigners would like it; they only want fair play.

2610. Would they not get fair play if they were put into a separate market?—I rather fancy not.

2611. (*Professor Spooner.*) But if the same regulations obtained in both markets as to slaughter, it would not have any effect in depreciating the cattle?—It would in buying the beasts. Most of the meat salesmen go into the market, and buy; they go from one foreigner to another, and to the home market, and thus they gain the price of the market; but that I think they would not do if the markets were separate.

2612. You think that it would be an inconvenience to the buyers?—Yes.

2613. (*Mr. Lowe.*) I suppose that what the foreigners fear is that there would not be the same competition of buyers for their beasts?—Yes.

2614. (*Viscount Cranborne.*) What are the symptoms which attract you when you look at the animals in this cursory way; you cannot see whether the animals horns are cold?—If we had any symptoms from which we thought that an animal was diseased, we should have it minutely examined as to the coldness of the horns, and all other symptoms. If a man is capable as regards his professional knowledge, he can tell by the expression of the eye, and the mode of gait, and the animal's hair, and the way in which it goes; we can tell within a little whether it is healthy or not, the same as I might do with you, gentlemen. I could tell to a certain extent whether there was any disease going on, such as lung disease or pleuro-pneumonia, or this Cattle Plague, or cholera, or anything of that sort. The expression of the eye gives you the whole.

2615. Then it is one of these general symptoms, consisting of the expression of the eye, and so forth, which you look for in the examination?—We judge from the expression of the eye and the general gait of the animal whether the animal is perfectly healthy, and if we have any idea that it is not we have it taken on one side and thoroughly examined.

2616. Have no cases of Rinderpest been known in which that expression of the eye has been wanting?—I think not; I think that the eye will show you to a very great extent. All I can say is, that the foreign cattle are particularly healthy, and it seems a matter of great doubt whether the disease has been imported here by the Revel case (for I find by my books that on the 4th of June 1860, 20 oxen were imported from St. Petersburgh in the ship "Wesley," consigned to Baron Rothschild), or whether it spontaneously broke out.

2617. (*Mr. Read.*) You have seen several cases of this Cattle Plague?—I have seen some hundreds. I have attended to a great many.

2618. Have you a good country practice, where you can see these cattle?—Yes; a very large practice, both town and country as well; but I did not care much about the country practice until this Cattle Plague came on, and I had many friends where I was living to send for me in all quarters to go and see the animals. When I was down at Harwich I went to a person of the name of Charles Glover, at Bentley in Essex; there I could distinctly see that the sheep are as liable to the disease as the bovine animals; there I had ocular demonstration.

2619. How many beasts and sheep came in the seven vessels which were disembarked at the port of London yesterday?—I can hardly tell you that, because I have put the nine together, but I can let you know.

2620. Yesterday must have been a very busy day? Yes, particularly so. It is very seldom that it happens that way, because the most of these boats were due on Saturday, and the other boats were due on the Friday, therefore it was from the rough weather, and the fog, and the wind, and so on, which caused us to have so many all on one day.

2621. If nine vessels brought 8,000 head of stock, I suppose that we might consider that the seven would probably bring 6,000?—In saying 8,000 you must put down the larger size as well as the smaller.

2622. I suppose that we may consider that something like 6,000 or 7,000 arrived yesterday?—Yes; and in speaking of those cases which came in yesterday there were four vessels from Tonning, and I believe, without fear of contradiction, that they are as healthy beasts as we possibly can have. I never have had occasion when they have been killed, and a post-mortem examination has been made, to find anything the matter with them, except that they have been bruised. They are very particular there; they will not allow any improper exports, or anything like it.

2623. During nine hours yesterday you and your assistants had to inspect 6,000 or 7,000 head of cattle and sheep?—Yes.

2624. I hope you had some lunch in the day?—No.

2625. (*Viscount Cranborne.*) Do you think that your inspection was as energetic towards the end as at the beginning?—It was very hard work.

2626. (*Mr. Lowe.*) You have two assistants who are veterinary surgeons?—Yes.

2627. (*Chairman.*) Is there any other point to which you would like to call the attention of the Commission?—I have suggested many things to the Commissioners of Customs. I should like peremptory orders to have ships thoroughly cleansed, and that as

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soon as the cargo is delivered the ship should be thoroughly washed down and disinfectants applied; and the same with regard to slaughter-houses.

2628. There is no alteration in the mode of inspection which you would wish to suggest?—I do not see that we can have anything better in the way of inspection, because if any animal has the disease or symptoms of the disease it is stopped. That is where they find so much fault with the port of London.

The witness withdrew.

Professor J. Gamgee.

Professor JOHN GAMGEE examined.

2629. (*Chairman.*) You are a member of the Royal Veterinary College?—I am a member of the Royal College of Veterinary Surgeons.

2630. And also head of the new Albert Veterinary College?—Yes.

2631. Have you studied the subject of the cattle disease?—I have.

2632. Will you state to the Commission whether you are satisfied that the disease now in the country is that which is called the Rinderpest or steppe murrain?—I am perfectly satisfied as to that.

2633. And also that it is highly infectious?—Decidedly; it is a pure contagion.

2634. Will you state what you believe to have been the origin of the disease in England?—I consider the origin of the disease in England to have been due to the importation of infected cattle from Russia.

2635. Will you state your grounds for forming that opinion?—My grounds are twofold. In the first place we know (at all events scientific men accept it as the truth) that the disease could not reach any country beyond Russia, except by direct or indirect importation from that country; that is established by the history of many outbreaks, through the manner in which the malady is suppressed in parts distant from Russia, and that is especially contrasted with the constant prevalence of the disease in some portion or other of the Russian dominions. Then a second reason why I consider the disease to be imported is this. For many years we have never imported stock direct from Russia. Whatever Russian cattle have reached us have come through Prussia or Austria, where they have been subjected to a system of quarantine, which has effectually prevented the communication of the disease through them to this country. I, several years ago, made special inquiries as to the chances of a direct importation from Russia, and in speaking to some of the great cattle importers they assured me that so soon as the direct importation would pay they should of course engage in it. At that time I made, I believe, some communications to the Government, but I specially wrote to the public papers, declaring that we should get the cattle plague through the Baltic, for I had reason to believe that the disease would come here if we had any importations from Memel or any of the Baltic ports. Now it is remarkable that the very first cargo which did arrive was followed by an outbreak of the disease. The question then arises, was that stock healthy, or did it come from an infected country or district, and was it the stock which communicated the disease here.

2636. We should like to have your evidence upon the question, whether you traced any direct communication from these animals to animals suffering with the rinderpest?—No. The evidence which I have is this: I have seen all the papers, and have seen papers from persons in Revel, which prove that at all events some animals did not come from Esthonia, which was somewhat free from the disease, but a certain portion came from the interior of Russia. That strengthened my belief that they were coming from an infected country, and then I searched for information with regard to the stock which communicated the disease, and I could trace nothing more than that some oxen, supposed to be Russian oxen, were seen sick on the 14th of June. Certain it is that in the London dairies the disease was among the cows, which caught the disease I believe in the Metropolitan Cattle Market.

2637. Will you state to the Commission any information which you have to prove that these animals which were put on board at Revel came from an infected district?—The information on that point is incomplete. Forty-six animals were brought over through St. Petersburg to Revel to make up the deficiency of those supplies in Esthonia. Of these, only 13 were chosen. I have seen an account of the cargo in the agent's own handwriting.

2638. Who was the agent?—Clayhills and Son, I believe, in Revel.

2639. Did those 46 animals come from an infected part of the country?—They came, so far as I can ascertain, through St. Petersburgh, from a distant part. Naturally, if they came from Russia, they came from an infected country, because Russia is never free from the Cattle Plague, and not far from St. Petersburg they had the Cattle Plague very severely last November.

2640. How long did this outbreak near St. Petersburg continue?—I cannot say. I begged Professor Unterberger to send me over the most recent statistics as to the Rinderpest, and he has not yet done so. I expect them daily, but he told me that they were not published beyond last May. They are commonly published in Russia from May to May, but they are not very accurate. I drew up some maps for the Government three or four years ago, where I showed that the provinces of Russia infected were even those up towards St. Petersburg; and there is a very broad tract of country where there are yearly outbreaks.

2641. Will you give us any proof that some of these 46 animals coming from St. Petersburg were embarked on the "Tonning?"—I cannot.

2642. We had it stated by one witness that the thirteen animals which came from St. Petersburg were embarked in the vessel, and it was denied by another witness?—I cannot state that.

2643. Who gave you the information?—I got a considerable amount of information from Mr. Burchell; but I tested all that he told me by the documents from Russia, and I read them over carefully. I had a long list indicating the special parts through which these cattle came, and I have the German contract in my pocket under which the cattle were bought.

2644. It is very important to know, first, whether any animals were embarked in the "Tonning" except those from Esthonia; and, secondly, whether, if any from other localities were embarked, they came from infected districts?—Of course we have not had the advantage of looking over them, and investigating the matter. There is one part of the evidence which to my mind is most satisfactory; a butcher had to kill 13 of these animals at Revel; that butcher is named Siehbert. Another animal died in the yard, and Mr. Burchell assures me that one was sick on the voyage, and that he kept him on brandy and water.

2645. (*Viscount Cranborne.*) But that one recovered?—Yes; and I understand was sold for 11*l.* in Hull.

2646. After the animals were landed in Hull did you take any pains to trace them up to their final destination?—Yes; I made some inquiries. I could not make any inquiries in Hull. I made some inquiries in London, and from what I could understand I believe that 172 were brought to London; 30 of these I traced to Mr. Baker, who is a Government contractor; I believe that he was one of the importers. There were three men connected with the thing, Mr. John Hönck, Mr. Baker, and Mr. Burchell. Mr. Baker, I believe, took 30 at once; but these animals, I understand, were not all sold off that day, but appeared in the market for two or three days in

succession; I cannot say how many days, but I am told that these animals were seen in the market more than once.

2647. (*Chairman.*) You never were able to trace them up to any animals directly affected with the Rinderpest?—No.

2648. (*Professor Spooner.*) When you say two or three days in succession, you mean succeeding market days, and not consecutive days?—Just so.

2649. (*Chairman.*) How long after the presence of these Russian cattle in the markets did the Rinderpest appear in England?—The earliest time that I have heard of its appearance was the 14th of June. Diseased cattle were seen with the present disease, which was afterwards recognized by persons who saw it as decided Rinderpest, on the 14th of June.

2650. Can you give us particulars as to those animals?—I can give you particulars with regard to the 19th of June, for I saw the cheque which was paid for two cows, which were evidently infected; for one of them was seized severely on the Saturday; the two were sold at one date, and communicated the disease in Lambeth Walk.

2651. Whose property were these cows?—Mr. Carvell's. This occurred in the course of these inquiries. I am always particular not to trust to the people saying that they bought the animals on such a market day, because of course they very soon forget the week; and I asked him to show me his cheque book, and he showed me his cheque book. He paid for the cows on the day that he bought them. He bought two Dutch cows on the 19th of June; one of these was sick very shortly afterwards, and by Saturday morning it was very ill; that would be the 24th. Those two cows communicated the disease to one of his sheds, and 12 of the animals died; the two were put with 12 others, making 14 in one shed; and the 12 were either partly disposed of or slaughtered; the majority of them, however, were slaughtered. He had another large shed with a lot of cows in it, and that shed was preserved from the fact that the sick animals never went near those in it. At all events it was preserved for a certain period; but I believe that he has since sustained very serious losses.

2652. Where did he purchase these two animals?—In the Metropolitan Cattle Market.

2653. Were you able to trace them further than to the possession of this person?—I have the name of the man whom he bought them from.

2654. Perhaps you will get that information?—I shall.

2655. What reason have you to think that on the 14th animals affected by the disease were in the Metropolitan Market?—On the very first day that I made inquiries with regard to the rinderpest, on the 29th July, I went to Marylebone, and I cross-questioned the dairymen very carefully as to the period when their cattle began to die, and through some of the most intelligent men, the names of one or two of whom I am ready to give you, I found that they had seen animals presenting all the signs of the illness which they had among their cows on the 14th of June in the Metropolitan Cattle Market. I ascertained that on the very first day that I was making inquiries.

2656. (*Mr. Lowe.*) How are you satisfied that this disease is identical with the Rinderpest?—Because I have seen the Rinderpest abroad, and I have very carefully examined it.

2656a. Where have you seen it?—In Hungary. For many years I have been acquainted with the pathological lesions of it, not only from the writings of others, but from examining specimens in foreign colleges.

2657. You had a thoroughly good knowledge of it before this outbreak?—Yes.

2658. And it coincides exactly, does it?—Yes.

2659. Is there any difference?—None whatever. When I say no difference, it is very strange that the disease presents singular symptoms in different countries. I have seen cases in Hungary where the animals manifested in the early stage very severe symptoms; twitchings and even delirium. I have seen an ox roar out as if he were rabid, and I believe that they have more of the nervous phenomena in the cattle of the steppes, and in the Hungarian oxen than here; more twitching, and more evidence of the paralysis at the end of the attack. In this country too we notice very singular symptoms as to the course of the disease in different parts of the country.

2660. I suppose that you expect à priori that the disease would be modified in some degree by the climate?—It is more modified by the breed than by the climate, as far as we can learn. The Russian cattle are affected with a mild form of the disease, and all others with a very virulent form.

2661. Have you no apprehension that it may have come from Hungarian cattle?—None.

2662. Hungarian cattle do find their way here, do they not?—Yes.

2663. And there always is rinderpest in Hungary?—Yes; there has been for many years past; but the Hungarian cattle are not fattened up very much in Hungary for the London market. We have, perhaps, more from the Tyrol and from Prussia; and indeed the Austrians would not allow of any traffic from a place where the Rinderpest existed.

2664. Your ground for not expecting it from the Hungarian cattle is the greater strictness of the Austrians in not letting diseased animals through?—Yes.

2665. You are of opinion that the disease commenced in the market, and went from thence to the dairies, and that it did not commence in the dairies, and go from thence to the market?—Clearly.

2666. Why is that?—On the ground that it is a specific disease incapable of production from any number of accidental causes which you might combine in the London cowsheds or in any other place.

2667. (*Dr. Playfair.*) Are you aware that the Austrian rules are, that cattle for export are only inspected, and that cattle to go into the interior of the country are put into a quarantine of 21 days?—Yes.

2668. Then do you think that a single inspection by a veterinary surgeon is sufficient to prevent any animal having the disease from passing into the trucks, and going for export?—It clearly would not by itself be sufficient had they not the other system of always exercising a control; any system of inspection otherwise must be futile.

2669. Are you aware that when the cattle are for export, and going by railway, they do not apply the severe system which they do apply for the cattle which are to remain in the country?—I am not aware of that. I am simply aware that they would not knowingly allow a traffic from a Rinderpest centre.

2670. Are you quite confident in what you state, that these Russian cattle were observed several times in the market, because the owner declares that they were all sold on the 2d of June?—I of course am only stating what has been represented to me by several persons; they represent that the numbers upon their horns, or some special marks which the Russians have, were noticed upon them, and that the animals did return.

2671. Have you specific evidence upon that subject?—No.

2672. In the case of the cattle which you think came from St. Petersburg, how many days would it be before they went from St. Petersburg to Revel?—I cannot tell you how long it would take; they were driven in four horse waggons.

2673. It would take a considerable number of days?—I should suppose so.

2674. Would not the disease have developed itself in that time?—Very often herds of steppe cattle carry the disease, and it lurks about them without any mark of it, and in that way we frequently have insidious introductions of the disease on the border frontiers.

2675. Are you aware that it has been stated by the importers that there were none of the steppe breed in these cattle?—They were Russian cattle.

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2676. Have Russian cattle the power of carrying the infection?—Yes; the home breeds of Russia have, and when they are in the convalescent state. The disease has been carried by breeds apparently healthy, and that is why the quarantine is so universally enforced, especially upon the Prussian frontier.

2677. Do you believe that if the statement was true that all the animals were sold on the 2d of June, disease not appearing until the 24th of June could have been caused by these cattle?—Clearly.

2678. How?—It could have been caused by indirect communication; for example, by an animal having been in the market on one market day; it might have been caused on the second or third market day.

2679. Would it not have appeared on some day six or seven days afterwards?—I have not the slightest doubt that it did appear, though I cannot prove it. I do not believe that the animals affected on the 19th were the first animals which had the disease.

2680. You think that there were previous cases, although there is no evidence of it?—Yes; we always labour under a disadvantage in investigations at a distant date in that way.

2681. (*Mr. Read.*) Are you quite sure that this could not be a spontaneous outburst?—Perfectly certain.

2682. If this Revel case should break down as to its having imported the disease, you have no other idea upon the subject, as to how it could have come into the country?—No; I firmly believe myself that it came from Revel.

2683. I think you said that some cases, in all probability, occurred before the 24th of June?—Yes.

2684. (*Dr. Parkes.*) In speaking of the cattle which were supposed to be ill on the 14th of June, what was the exact evidence of disease which was given to you? Certain persons saw the cattle diseased, as they supposed, in the Metropolitan Market on the 14th of June, and they described the symptoms to you?—Yes; they described the running from the eyes and nose, and the drooping and the general symptoms, which, when they spoke to me they knew perfectly well, from having seen a great many cases in their own sheds.

2685. Were they competent persons, likely to notice all these things?—Yes; the cowkeepers become very intelligent in looking after their own cattle; they become very sharp in detecting early symptoms. They could not give an opinion like a professional man, but we find that they then saw animals with the same disease as that which occurred afterwards in their own sheds.

2686. The animals to which you have referred were two Dutch cows bought on the 19th, and one was ill on the 24th?—Yes; those animals must have caught the disease some time between the 14th and the 19th, and that is quite sufficient to pin down the disease to an earlier date than the 19th in point of communication.

2687. But those animals were bought on the 19th?—Yes.

2688. They were in the market for five or six hours on the 19th?—Yes.

2689. According to your view that was the only time when they were exposed to the infection?—The animals might have been exposed at the previous market.

2690. Can you learn that?—I almost think that we can learn it.

2691. The period of incubation in that case would be only five days?—Yes, and that is not impossible; it is rare, but it might be so.

2692. Can you ascertain more definitely about these animals which were ill on the 19th as to their previous exposure in the market, where they came from, when they were imported, and when they arrived in the port of London?—I will see what I can do in order to get the information up. I have some notes upon the matter.

2693. (*Viscount Cranborne.*) How long do these steppe cattle, and also the native breeds of Russian cattle, carry about the disease in a latent and imperceptible form?—I am not aware that we have any very definite fact to be able to state the decided period, but I look upon a convalescent animal as at least very dangerous for two months after its attack.

9694. Then no quarantine which did not secure a period of two months would be effective?—Probably it might not be absolutely effective. It has been found in practice really that a much shorter quarantine is sufficient, and the opinion in Europe is that we should not have the period of quarantine longer than the known period of the incubation of the disorder.

2695. What in your opinion is that?—In the inoculation cases which I have had it has usually averaged from six to eight days, and not beyond that. I do not believe that you have the period of the incubation of the disease longer than 10 days at the outside, if even so long.

2696. Then how do you account for the fact that animals from the neighbourhood of St. Petersburg have carried the disease for a much longer period than 10 days?—The way in which these diseases are carried over a long period is from one animal affecting another. For instance, these animals from St. Petersburg would very soon affect animals at Revel, and from there there would be a succession of cases which would keep it up; and we had a succession of cases.

2697. What cases were those?—The animals which were seized with illness. We cannot get very definite evidence about them, but we know that every one of these animals on being seized with illness was slaughtered, or died, or was cured.

2698. Have you seen any evidence that these animals were seized with illness at Revel, and were killed on account of it?—I have seen evidence from agents that they were slaughtered at Revel, and of course they were slaughtered there for a particular purpose.

2699. Were not they slaughtered because they would have been injured on the journey?—Not, so far as I can ascertain.

2700. Have you not heard that stated?—I have heard of one animal having broken its back, and other circumstances of that description, but I have heard of no foundation for it. The person who was with the animals denies it. He says that the animals were ill.

2701. Has he given you any account of their illness?—He knows the Rinderpest perfectly well, and he assures me they were affected with the disorder.

2702. That is Mr. Burchell?—Yes.

2703. (*Chairman.*) Have you traced the course of this plague in this country?—I have followed the disease out to a considerable extent, from the commencement, of course; and the malady in the main, no doubt, has spread from the Metropolitan Market, and from there it has radiated outwards in all directions. The disease, undoubtedly, was communicated from the London Cattle Market to Edinburgh, and through Edinburgh it was propagated over the greater part of Scotland.

2704. Is it your opinion that the disease is spreading at the present time?—I believe it is spreading more rapidly now than it has done since the commencement.

2705. Do you attribute that to the circumstance that there are other focuses of infection besides the Metropolitan Market; I mean the country markets?—Yes, I do. The farmers are now compelled to utilize their food by buying stock; it is the fact that the season for store stock has now come round, and unless they exercise very great precautions the disease must spread as it is now spreading.

2706. The Government have met the difficulty by issuing various Orders in Council. Could you state to the Commission what your opinion is as to the efficiency of those orders?—Unfortunately, my observations over the country prove that the orders in Council have not served the purpose that they should have served, and that the disease has spread considerably, and the orders are, to a certain extent, inoperative.

2707. Have those orders, in your opinion, been

evaded?—Undoubtedly they have been evaded to a considerable extent, but where they have not been evaded the orders have been insufficient.

2708. In what respect have those orders been evaded?—They have been insufficient, for the lack of authority seemingly in controlling the movements of stock, and in securing at once the effectual slaughter of animals; indeed the rules seem inoperative. Up to recently we have very commonly found that whenever the disease appeared the infected animals were allowed to move away, and I made a special observation upon this point before the Metropolitan Cattle Plague Committee. It was stated there, by Professor Simonds, that the Government did not see how it could prevent the removal of the healthy cattle, but that the diseased cattle might be kept on the premises where they were found. I have seen a number of outbreaks arise from infected cattle leaving the sheds in which they have been kept, and being conveyed to markets and other places; and there are various ways in which the disease is communicated. For example, the result of my observations in London has led me to this conclusion, that wherever dairymen now follow stringently the Orders in Council they must lose the whole of their stock, with very few exceptions, that is to say, they must lose the money value of their stock, which they might have secured as salvage to some extent, and this of course makes them rather inclined to evade the law. There is a great deal of disease going on in various parts of the country without the attention of the Government inspectors being called to it, and without any measures whatever being adopted, and where measures are adopted, on account of the impossibility seemingly of regulating the proper slaughter of the infected animals, and so on, the disease is propagated and carried through the country. In addition to that, in London we have a very great deficiency of inspectors, and a great want of men to look after the matter; for instance, diseased and dead animals have been seen in sheds for several days in succession. I believe, nevertheless, that, under the circumstances, as much has been done as they felt it in their power to do, but without far more active measures the disease must be propagated as it has been propagated up to the present time.

2709. Can you cite any particular instances of evasion; for it is very important to get such information upon our evidence?—I have known as many as 100 diseased animals, many of them being sent to market, and others slaughtered that were diseased at the rate of four and five a day, and the malady continuing over a space of three weeks or a month in one place; and of course there the Orders in Council are a thorough evil, and no inspector has heard anything of the matter.

2710. It is I suppose the interest of the owners of cattle who have diseased cattle not to declare that they have the disease on their premises?—Of course; and one man has repeatedly himself shown me the cheques for the amount which he has received for his cattle at the Metropolitan Market.

2711. Will you state who that was?—I do not like to mention the name of the person, but he was the owner of the cattle.

2712. A cowkeeper showed you the cheques he had received for a number of diseased animals which he had sent to the Metropolitan Market?—Yes, and sold there.

2713. Can you state what the number was?—Not exactly, but some days he would have sold five, and on other days a dozen; and that same case is now nearly a month old; it is that time since I was last there; and then on one Sunday he had five or six animals himself that were taken to a slaughter-house in Whitechapel with those of his neighbours, and they made up altogether very nearly 30, which were all diseased, and they walked through the town in that state; they were moved about, and of course they discharged their excrements.

2714. Were those animals sent to various parts of the country from the Metropolitan Market?—Where the cows went to I cannot say, but they were sold in the Metropolitan Market. I have traced cattle from the Metropolitan Market to Romford, Chelmsford, and to a number of other markets, Birmingham for instance, and of course we well know that some went to Norfolk. There is a cow dealer in Edinburgh, whom I have known for several years as a man who has propagated disease in all directions, by the purchase and sale of diseased animals, having bought them cheaply. That man came to London on hearing that the disease had broken out, and bought a lot of animals, and by that means communicated the malady.

2715. In that way you traced the disease to Edinburgh?—Yes.

2716. Although the Orders in Council have broken down with respect to live animals that are diseased, have the regulations worked efficiently as to dead carcases?—I am sorry to say that they have worked very badly indeed; and one of the most disgraceful things that has occurred since the commencement of the outbreak has been the condition of the horse-slaughtering places in London. I have been constantly up to Atcheler's, and other places on my way, to look at the Metropolitan Market, and these animals are within a very few yards from the high road along which the cattle go to and come from the market, and more than once have I seen herds of cattle break up the lane, as cattle will do, and diverge from the current along which they are being driven, and go straight into Atcheler's yard, where three or four cows were lying dead from the Cattle Plague. I should think that the best thing would be to provide proper means by which those animals could be safely slaughtered, and got out of the way of the road, for so long as we have such a filthy system as that in existence it is impossible to do anything.

2717. The places to which you refer are the slaughter-houses to which infected cattle are taken?—Yes; that is, the dying cattle; not the infected animals; they go straight up to the slaughter-houses at the market itself. The animals can go into the Metropolitan Market, and they have gone, and if they have been slaughtered they have been slaughtered there.

2718. Will you be good enough to state why you believe that the disease has actually spread from the manner in which slaughter-houses, such as Mr. Atcheler's, are conducted?—They are taken there dead, or to be slaughtered; they are carried there on the ordinary horse-slaughterer's carts, with their heads hanging out, or the head one way and the tail the other, excrement being discharged from the anus, and by that means the disease is communicated.

2719. Have you seen this with your own eyes?—Yes, I have, and not once, but repeatedly.

2720. You have referred to the Metropolitan Market slaughter-houses. What have you to state with regard to them?—On the very first day, Sunday, I think it was the 30th of July, after coming up from Edinburgh, I saw some diseased animals, in the first place, in the lairs at the Metropolitan Cattle Market. I communicated the fact to the Mayor and Corporation of London at once, and then I went down to one of the slaughter-houses. The men there would not let me in, but I managed to get in by paying. I there saw diseased animals being slaughtered, and I have no doubt but that other animals were infected with the malady. However, there were some there that were diseased, and I examined their intestines. But you have there slaughter-houses destined for the slaughter of healthy food near a large live-stock market; and I think we should not have cattle with the Cattle Plague upon them killed there. With regard to the talk of the abolition of the London cowsheds, I think the great thing is to centralize the London slaughter-houses; that, in my opinion, is the most important point.

2721. Are we to understand from you that the diseased animals are slaughtered in the slaughter-

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houses indiscriminately with animals that are intended for human food?—Yes; I have seen them so slaughtered.

2722. With respect to the lairs to which you have alluded, in what condition are they generally?—They have been improving them lately; but until recently, until the month of August last, they had always been in a very bad condition, and there you were always able to find diseased cattle. In fact, on a Sunday, two or three years ago, I took with me Mr. Simon, in order to satisfy him that what I had stated in a report which I had drawn up was perfectly correct,—that you could get any number of specimens of contagious disease in the lairs there.

2723. Are they not under Government inspection at this moment?—At the present time they may be, but I am referring to the condition of the lairs up to a period, say within two months after the outbreak of the disease.

2724. Were not the lairs inspected before the month of August by Government inspectors?—No, certainly not; that is to say, they might call it inspection, but I assert that they were not inspected, and they were kept in a very bad condition; and a singular circumstance occurred on the 30th of July. I walked round, and saw some diseased cattle there. A rather intelligent man stood by, and wishing, if possible, to trace out the history of those animals, I said to him, "What sort of cattle have you got there?" He turned round rather crustily, and said, "I suppose you will very soon want to know how much money I have got in my pocket." Of course he had got an article there that he could not speak of with any propriety, and he would not give me any information. In times past, I have constantly seen herds of diseased cattle in lairs side by side with cows that were going into the London sheds, and other animals; indeed the inspection at that market altogether has been the most ridiculous thing in the world.

2725. Will you be good enough to state whether this state of affairs is still going on, and whether the present inspection of cowsheds and lairs in London is insufficient?—I cannot speak with regard to the present character of the inspection of the lairs or of the market,—not up to the present day; but I have known cases where the inspection has not been complete, although made. I am by no means one of those who would recommend a stringent door-to-door inspection; but I believe that the law is evaded, owing to the peculiar fact that the cow dealers do not see any good that will come from the Government measures, but, on the contrary, great restriction and harm; and they therefore will not declare that the disease does exist. I think that we ought to have, if possible, a system under which it would be for their interest to declare the existence of the disease; you cannot control these things by threatening them with fines, and alarming them with fear of imprisonment.

2726. With regard to the Metropolitan Cattle Market, what observations or recommendations have you to make?—I would say that certainly until recently, or until the matter was taken up lately more actively, and from the moment that special measures were adopted, the Metropolitan Cattle Market always contained, to my knowledge, whenever I was there, diseased animals which were exposed there for hours together, and in that way, of course, any disease could have been propagated through the market.

2727. What was the date of the improvement which you have mentioned?—I cannot remember precisely when, but I know that they put on an inspector at each gate, and they made some changes. I have not been there for the last month or so, but it has been recently; within the last two months or six weeks, I suppose.

2728. Would it be safe, in your opinion, for the dealers in cattle in the country to buy stock in the Metropolitan Market?—I consider that it would not be safe at all.

2729. Have you any remarks to make upon the recent Consolidated Order in Council with respect to limiting the animals that go to the Metropolitan Market to those only which are to be slaughtered; do you approve of that?—I do approve of that very strongly. I should have liked also with that the instant slaughtering of those animals, and not letting them go wherever they might, without the possibility or chance of tracing them in many instances.

2730. In what way do you believe the regulation breaks down?—I believe it breaks down after the cattle leave the market.

2731. Will you explain in what way?—In consequence of the animals being diverted in various ways. I have seen them moved about in various directions; and I see nothing to prevent them from being smuggled away whenever the parties concerned like to do so.

2732. Is it your opinion that the disease is spread from the Metropolitan Market now very nearly as much as it was before the order came into force?—I do not think that it is. I think that the measure has been beneficial, but there is a difference between a measure being beneficial and a measure being absolutely effectual.

2733. In your opinion it is not absolutely effectual?—I do not think it is.

2734. What is your opinion as to the measures taken by the Government with reference to the country districts?—Wherever I see that the Government measures are followed, nothing, so far as I can understand, is done to save the owners from an enormous amount of loss. All that is done is to restrict the movement of cattle, and nothing more, and the result is that if the Government measures are carried out as a rule we find that the animals die from the first to the last.

2735. How would you propose to remedy that?—The proper way to remedy that would undoubtedly be to have a proper national insurance system, by which a certain compensation could be given, in order to make it the interest of owners to declare the presence of the disease, and then, on the appearance of the disease in one animal, ordering the instant slaughter of all the others, without sending them to market for that purpose; that would be a means of saving money to the country and to the farmers, and of preventing the propagation of the disease throughout the land. I have suggested this before, and it is a plan which in my opinion would be perfectly practicable, and easily put into operation, but nothing can be done without Government carrying it out.

2736. The question of an insurance association may be the subject of future inquiry, but on what grounds do you say that it would be an immediate means of arresting the progress of the disease?—Because it would give you a control over the outbreaks without any further difficulty. If we had a substantial national insurance system the stockowners would fall under it, and upon that system the instant that an animal was infected we should know of it, and from that time we could adopt proper measures to concentrate the disease.

2737. How could you make certain that all the stockowners would insure?—I think it would be so palpably to their interest to do so; they would be ruined if they did not do so, and they would have protection if they did; but they will not entertain the idea of any insurance office in which they have not the most perfect confidence. They have been cheated over a number of years to such an extent; they have paid their premiums, and they have not received their salvage as they expected, so that they will absolutely resist any system except one that I believe could be well carried out by the Government

2738. Are you not aware that many farmers think they could carry out your suggestion for their individual benefit alone, determining not to join any association, and when they have a diseased animal to kill that one and send all the rest to market?—Some do that and some do not, and they require to have it done for them for the benefit of the country at large.

2739. That is by a voluntary contribution to the insurance association?—Yes; I think that provided the Government established a national insurance system, the thing would succeed, and it would not drain the public purse.

2740. You are probably aware that in many counties, as in Northamptonshire, for instance, there have been many local associations got up?—Yes.

2741. You are strongly opposed, I presume, to small local associations?—Yes; I think they must be extended upon a broad area.

2742. Believing that if an outbreak took place within a limited district the assurers would be ruined?—Yes. We have associations now, and they say, "We are not an insurance society;" but they led people to believe that they were at first. In Edinburgh people subscribed; but the truth is that they cannot meet their losses in other counties; they cannot get up mutual associations, in some parts of Scotland, and the farmers have no confidence in them.

2743. You have already referred to the present system of inspection, to the Orders in Council, and how they work. What remedies have you to suggest with a view to stopping the disease at once?—Of course it is an extremely difficult matter to lay down a number of comprehensive rules at a moment's notice; but, in general terms, I would say that the proper way would be to get a control over every outbreak, and slaughter the whole of the horned cattle, diseased and the healthy, and so prevent anything moving off from the place in the shape of live stock, whether they be sheep or cattle, and indeed other animals which may carry the disease. I believe that whenever it is possible they should be slaughtered on the premises, and nowhere else, and not be moved a yard if it can be managed.

2744. Suggestions have been made to the Commission with regard to the stoppage of large fairs and markets. What is your opinion upon that point?—My opinion is that any such measure as that should be carried out direct from London, and that is where the Orders in Council fail, for they leave the vestries and the mayors and the corporations of the various cities to carry out these regulations or not as they wish, and in many cases the result is that only partial measures are adopted on their part, and the country is left unprotected, and that is quite enough to keep up the disease, which is carried from one place to another; one place is protected and another is unprotected, and so it goes on. I thought at first that it was a proper and prudent thing to do,—it is rather late to begin now,—but I thought that the stock markets should instantly have been checked, every one of them.

2745. Would you confine that remark to markets for the sale of store cattle?—No; I would stop every one of them. I would not have one of them held.

2746. Not markets for fat animals?—No. I would have them sold as they are sold now, in many instances, with very great advantage. Of course it is a very difficult thing to do, and it is a great inconvenience, but it would be a more serious thing to lose all our stock.

2747. You would stop all movement of cattle whatsoever?—I would. Of course my remarks certainly do not apply to counties in which there was obviously no disease, for example, in Ross-shire and in Caithness; they will not allow any animals to come in there. In Caithness I know for a fact that there are some spots where the animals might be allowed to congregate; but certainly upon the whole I think we ought to have the movement of the cattle stopped, although it may seem a very harsh measure.

2748. You would carry on the meat trade of the country by a system of dead meat markets?—Yes, as much as possible. I hold that one source of evil which has not been looked at, and which have been attended with serious disaster, has been the admixture of foreign stock and English stock since the outbreak of the disease. I know that Dutch cattle have come into this country that were diseased; cargoes have been brought over here that have been diseased. In some cases after the animals have been found to be diseased they have been thrown overboard, and some have been washed on shore in the county of Kent, and others have been washed on shore in the neighbourhood of Newcastle, and this importation of diseased cattle of course keeps adding to the virus already in the country, and I know not when the disease will cease. With regard to Holland, we certainly should not have imported any cattle from Holland for some weeks past; or we should have another system, which I suggested several years ago, that of having foreign stock markets and foreign stock slaughter-houses.

2749. Will you state your reason for prohibiting markets for the sale of fat cattle ready for the butcher as distinguished from store cattle?—Simply because the animals coming from the farms now, under existing circumstances, can readily travel over the roads; they can travel over any part of the country, and they can in that way discharge the poison, and so communicate the disease to other animals.

2750. Do you believe that the disease can be communicated by railway trucks passing through a district?—No, I do not think it can. Of course if you have a lot of trucks in a siding at a station, and there are pastures all round, then the cattle may communicate the disease; but upon the whole I think the mere fact of transit, and the running of trains through a country, does not have that effect.

2751. Would the same remark be applicable to foreign cattle, and would you stop their being exhibited in the markets?—I would give them markets for themselves. I would have a special foreign stock market. I would not stop the cattle coming over, but I would sell them in special markets. I would have them there slaughtered, and brought into the country as dead meat.

2752. You would create fresh markets?—Yes. The system of inspection at the ports has been useless in preventing the introduction of this disease; the same as in the case of small-pox, pleuro-pneumonia, and the foot and mouth disease.

2753. Then, however strict it may be, it will always be bad?—Yes; in fact it is worse than bad; it gives us the false idea of safety.

2754. Do you consider that the Metropolitan Market is properly disinfected after a market has been held, so that if sound animals came into it they would not catch the disorder?—I believe that great precautions have been taken to effect that end, and I understand that it is really well carried out; it has only, however, been recently done; of course since the outbreak of this disease. I may mention to the Commission that one of the very first things that I did, on ascertaining that the disease was here, was this:—I took upon myself to call some gentlemen together, and we formed an association; we then communicated with the steamboat companies and the railway proprietors, and with the Mayor and Corporation of the City of London, who were very angry at our imputing the spread of the disease to their market, for they thought that every thing was perfectly done, until they came to inquire, and then they found that all we had said was correct, and from that moment the market has been purified.

2755. When was that communication made to the Corporation?—Very early in August; the very week, I think, after I first saw the disease.

2756. (*Viscount Cranborne.*) With regard to a national rate, have you any calculations upon which a table of premiums for insurances could be made?—We have a number of facts upon that point, and those facts are most decided, in relation to other contagious diseases; but of course we should require to calculate rather carefully as to the probability of loss arising from the Cattle Plague after the institution of such a system; but I believe that if the Cattle Plague is allowed to go on the loss cannot be met by any known amount of money, that is to say, we cannot imagine whether it will cost ten millions or thirty millions, if we do not adopt preventive measures. I believe that if we had adopted a system, and have followed out

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the outbreaks closely, we should have have been able to limit the loss from the day that we commenced to not much more than 5 per cent. over the whole country, if so much,

2757. Your idea is, that the payment of 5 per cent. premium on the value of the cattle would put a stop to the present state of things, and leave the public exchequer indemnified ?—Certainly, as to the Cattle Plague alone ; but I believe it would also include the lung disease.

2758. Would you oblige every one to insure, or would you leave it optional ?—In relation to everything connected with the Cattle Plague, I am for really being very severe in insisting upon certain things being done, but I quite understand that that is difficult in matters of insurance ; but I believe that a voluntary system would work, because I think that farmers would have such confidence in it that they would see their interest and the salvation of the country in it. I think that you would have comparatively few exceptions. A poll-tax would be more effectual ; but my desire is that the system should not be a fleeting one, but that it should apply to diseases generally, so as not to have a recurrence of what we have had.

2759. Is the calculation which you have made of 5 per cent. founded upon your general knowledge of the subject, or upon any special data which you can furnish to this Commission ?—It is founded upon this : I know that in countries where the Cattle Plague prevails, and where effectual measures are carried out, even in Hungary, the mortality never exceeds 5 per cent. of the whole stock of the country. Wherever they have adopted means to suppress it, the mortality in the country has never exceeded 5 per cent. It is 90 per cent. very often in some districts; but taking a broad area it does not on the whole exceed 5 per cent. I will take the case of Hungary, apart from other portions of the Austrian dominions, for it is one of the most threatened and most constantly afflicted, and I find that during the last 15 years the loss in Hungary has never exceeded 5 per cent.

2760. Is an accurate census taken of the cattle in that country ?—Yes ; the statistics of the Rinderpest are very accurate.

2761. Can you furnish any of those statistics to this Commission ?—Yes ; I can give the statistics as to the Rinderpest in Austria and in Hungary.

2762. I understand you to accompany the suggestion for a national assurance with large powers to order the slaughtering cattle, both healthy and diseased, to be vested in inspectors ?—Clearly; I quite understand that there might be some objection raised by the farmers against individual inspectors, and that there ought therefore to be a system that would secure that the inspectors might occasionally be inspected and guided in their operations. I think that seems very important, but still, if they are paid for their cattle, there is no hardship.

2763. Would you kill the cattle only of the farmers who insure, or the cattle of all farmers ?—I should propose to kill the cattle of all, wherever the cattle disease infested a herd, and adopt the system that is adopted in Austria, which is, that those who are foolish enough not to adopt rational measures should be the sufferers. I would not indemnify a man if he resisted doing all that was necessary for his own good and for the good of the country.

2764. How extensive would be the cordon that you would draw around each place or district ?—I do not see that you would require any special cordon at all ; the important thing is to let us know where the disease is, and that is a matter which I think has been overlooked ; we require to know where it is ; if we know where an outbreak has occurred we kill it at once there, and there is no necessity for any extraordinary cordon, though it is not desirable to allow much traffic of stock through the infected district.

2765. How far from the point of infection would you kill all animals ?—I would only kill the unhealthy herd. I would not disseminate them in a district among the healthy herds ; it must be done with very great care, and in a way by which we should lose fewer cattle.

2766. Do you think there is a sufficient number of competent inspectors to carry such a system into execution ?—I have often said that the number of our veterinarians is deficient ; but although it is deficient a great deal may be done. A great many men could be procured in various ways by which the thing could be properly carried out. For example, we could carry out the system which is adopted in Australia of appointing scab inspectors amongst the best practical young farmers. It is not desirable, perhaps, unless we are forced ; but certainly we should not have, as we have now, butchers, and tailors, and shoemakers, and men of that class acting as inspectors.

2767. You do not contemplate confining the inspection to veterinary surgeons, but you would appoint farmers ?—Yes ; where I was absolutely forced to do so.

2768. Would the farmers, do you think, like to see their neighbours coming and ordering their cattle to be killed ?—No ; no more than they like the veterinary surgeons ; but you would require to have men who have had a certain training, like the young farmers in this country, who have gone through a certain course of veterinary education. I could point out 40 or 50 in a short time ; men who really have worked at veterinary science a great deal, if they are not absolutely veterinarians, but they have been taught the science at a college ; in the colleges at Edinburgh, for example.

2769. (*Dr. Parkes.*) Can you state the longest incubative period that you have known to occur ?—I think the longest that I have known has been eight days ; that is, that I have traced from the moment I have inoculated an animal to the manifestation of the disease,

2770. But I mean after exposure to contagion ?—I have not known any case longer than eight days.

2771. At what period in convalescence is the danger completely over ?—That is so indefinite that it is impossible to say ; our experiments are by no means so complete as they should be on these questions.

2772. You know of no symptom or certain condition of the animals that would enable you to say that they might be sent among other cattle ?—No.

2773. You spoke, I think, of healthy cattle carrying the disease ?—Yes ; I meant Russian cattle.

2774. Do you mean by particles of the poison adhering to them ?—Yes, of course ; by the poison adhering to their skin, hair, hoofs, &c.

2775. You do not suppose that an animal without something of that kind adhering to its hide could carry the disease ?—No ; unless an animal is healthy in this sense, that it has just had the disease ; and there is still a discharge of poison through which the disease may be caught.

2776. Then a healthy animal carrying the disease about with it might be completely purified from it ?—Yes, perfectly so ; they do purify them, and wash them.

2777. Do you think that perfect washing would properly cleanse any healthy animal carrying the disease ?—Yes, I think so.

2778. I gather from what I have read in your writings that you do not believe in the efficacy of any kind of treatment ?—I do not believe in the efficacy of any specific treatment, but a certain number of animals do recover.

2779. As a rule, what per-centage of them recover ?—I do not believe that that question has yet been settled in this country. We have had instances in which 50 per cent. have recovered, and others in which not one per cent. has recovered. We have not data in our possession at the present time to tell us what has been the proportion of animals that have recovered, but I believe that, generally speaking, in an infected district, whether you try methods of treatment or not, the mortality will always vary, although

it is a wide range, from about 75 to 95 per cent.; it is commonly from 85 to 95 per cent.

2780. What would be the causes for the extraordinary difference in the cases you have mentioned, as between 50 per cent. and 95 per cent?—As with every contagious disease, you have sometimes, from some predisposing cause or other, the mortality affected. When first I spoke on this outbreak I suggested that we should use iron extensively amongst our cattle, merely as a tonic, whenever we had a suspicion of the disease being in the neighbourhood, and I have seen among a herd that have had the iron a very remarkable diminution in the severity of the disease; I had in those cases more recoveries, probably, than in others. I have discountenanced the treatment of such animals as much as I could; I do not believe it is the right plan; but there are conditions under which herds are affected with the disease in a tolerably mild form, somewhat milder than usual. What those circumstances are we are not prepared to state.

2781. You see the fact without being able to account for it?—Yes.

2782. You would be inclined to recommend iron as a prophylactic mode of treatment?—Yes.

2783. Is there any other kind of prophylactic treatment that you would recommend?—No.

2784. Any external treatment of any kind, such as applications to the nostrils or to the mouth, in order to prevent the reception of the poison?—No. I know of one instance near Folkestone, where a man did everything that could possibly be suggested in the way of purification and cleanliness, and washing, and tonics; there were sixty animals, but the whole of them died in five days.

2785. He commenced his treatment before the disease commenced?—Yes; six weeks before.

2786. Could you give us the exact details of the treatment that was tried there, and the result?—He did not try medical treatment, but he resorted to preventive measures, and a system of disinfection that had been strongly recommended, and good feeding, letting the animals have a little nitre, and the iron just as a tonic. He tried that system, and he thought that he ought to have preserved them. The stock was of the finest description; a magnificent herd of short horned cows, and the ventilation was perfect; everything was done that the man could think of. I saw the animals on the 13th, when they appeared healthy, and he had not a hoof there on the 18th.

2787. I suppose that abroad they treat them in the same way?—Sometimes when the disease is in a district, and it attains such proportious that the whole of the animals are affected, they allow the people to try and treat them; and there are numerous persons who profess to cure the disease, as they do here. I receive every morning letters containing what is called a cure for the Cattle Plague; but the experience of many years abroad is, that these pretended cures are always failures, and in fact the treatment of the disease in any isolated case, supposing an animal to be absolutely separated from anything else, may be sanctioned, but as a national measure it should unquestionably be discarded.

2788. What do you consider are the best disinfectants; first of all for sheds?—I think that the best disinfectant for sheds is caustic soda and hot water. Chlorinated lime is very good. I have no faith, as a disinfectant for sheds, in Condy's fluid; it has been constantly administered internally, and it seems to keep the excrements in a healthy condition.

2789. You would recommend washing with caustic soda and hot water?—Yes.

2790. What strength of soda should be used?—To be tolerably effectual I should think about 20 degrees Twaddle; I mean of the soda ash of commerce; from 16 to 20 degrees of specific gravity. I think it would require 2 lbs. to a pailful.

2791. (*Dr. Playfair.*) You mean, I presume, as a cleanser, and not as a disinfectant?—My experience is that it is a cleanser. I believe that no kind of animal poison resists it, or would effectually resist it, after it had been used; it is a thing upon which experiments ought to be conducted; but that is my impression.

2792. Have you selected sheds in which animals have been, and applied the soda in the way you would recommend, and put other animals in immediately afterwards?—Not immediately; it is rather too serious a matter,—but it might be tried—the sources of communication are so subtle and numerous.

2793. What would you recommend for the purpose of disinfecting manure?—One of the best things that I know of is carbolic acid; carbolate of lime; that is my impression.

2794. Have you made experiments with it?—Yes. Chlorinated lime is very good, but I object to it in sheds; the chlorine gets disengaged, and torments the animals, and makes them sneeze, and it is very important to keep the cows very quiet; but it is a very good disinfectant.

2795. For the sake of the beasts, what disinfectant would you use?—No doubt one of the best for that purpose in the case of the excrement is chlorinated lime, although a strong solution of soda would be ample for the external parts; for the animals I have used Condy's fluid, giving them that internally in acidulated water. I believe there is a man who attended some animals which I treated in Limehouse, and he is carrying out and has carried out that system; he is one of the men who is reputed to have the greatest amount of success from using Condy's fluid in acidulated water; and at intervals some stimulating agent; methylated spirit has been used very largely. I do not think that we have any antidote for the poison.

2796. (*Dr. Quain.*) Are you personally acquainted with the steppe country?—No; I have never been there. I have been in the steppes of Hungary.

2797. Are you acquainted with the character of the country generally from reading?—Yes; I have read a good deal about Russia, and I have followed the geographical distribution of the disease very carefully.

2798. Have you formed any opinion as to why the disease exists so continuously in those regions?—My impression is that it is kept up by pure contagion, and not spontaneously developed; and the reason is, that there are there broad open plains where there cannot fail to be an intermingling of stock of every kind, and there is every opportunity for it, and it never dies out.

2799. Are no steps taken to prevent the spread of the disease?—Yes; they have attempted in Russia, owing to the restrictions put by foreign countries upon Russian cattle, to adopt inoculation measures. They wish, as Professor Jessen has stated, to inoculate all the cattle. They say there would be no fear then in getting Russian cattle, and in fact acting as we should in the case of small-pox by vaccinating every one.

2800. Has that plan been carried out to any great extent?—Yes, and they have succeeded with their inoculations where they have tried it, but it cannot be carried out as a national measure.

2801. Referring to the Revel cargo, you stated at the Social Science Meeting that three or four of the cattle were slaughtered?—Yes, at Revel; and one died at Revel, and another, I understood, was sick on the voyage.

2802. The impression left on my mind was that you wished to say that those animals certainly died of the Rinderpest?—That is my impression.

2803. You have no authentic information upon that point?—Yes, I have, if it can be relied upon, from the man who had the cattle.

2804. Are you aware that the vessel in which those cattle were brought over was used within a week afterwards?—I am not aware of that fact.

2805. And that no further case of disease has been referred to cattle being shipped in her?—I do not know how they could trace any outbreak of disease to the "Tonning" directly, considering the extra-

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ordinary prevalence of disease which there has been throughout the foreign cattle.

2806. With regard to the future, seeing how liable various parts of the continent are to suffer from this disease, you say that you would have special markets where the cattle should be sold and slaughtered directly? —Yes.

2807. Do you think that would be practicable in very warm weather ?—Perfectly so ; you can have places where the cattle might be kept for a time ; the Essex Marshes, for instance, are large enough, and you might have provision made for feeding them.

2808. That would amount to a species of quarantine ?—They are kept here from market to market now.

2809. Do you mean that they should be sold first, and then you would have them killed on the spot, or that you would have the dead meat sold in some public market ?—We have a public market for the sale of dead meat, and I would not have a distinct dead meat market for foreign stock ; but as to the live stock trade, it is very important to have those animals kept distinct ; they must be brought over alive, that we all understand, and they can be brought over alive. There are slaughter-houses here, and I think we should be conferring a great boon upon many butchers if we took those slaughter-houses from them. In an economical point of view the thing should be done.

2810. I thought you stated that you would have a dead meat market for foreign beasts ?—If I implied that I did not mean it ; not a foreign dead meat market, but a foreign stock market.

2811. (*Mr. Cecly.*) Do you consider that the disease which now exists in England is identical with that which exists in Russia ?—Yes.

2812. Does it differ at all in its pathological appearances ?—No, certainly not. We have one singular fact bearing out some statistics which I published some time ago as to the enormous losses by pleuro-pneumonia in Edinburgh, that in one part of the country we have it curiously complicated with the lung disease ; otherwise we have the same progress and the same manifestations, with some slight variations.

2813. I asked you the question because I have seen drawings from Vienna exhibiting more of diptheritic deposit in the trachea and upon the glands of the intestines ?—I have specimens of lymph that has been obtained. I know what it is in Vienna ; I have seen quite as much lymph and deposit as they have in Vienna in one case ; the intestines were almost free from disease in this country when the windpipe is seriously affected.

2814. They are exceptional cases ?—Yes ; the dense exudations in the trachea in Vienna are exceptional. I have not found in all the museums of Europe more than one case where there has been this variety of the disease,—a solid fibrinous deposit in the trachea. These cases are not common abroad any more than they are here.

2815. With regard to the disease in the sheep, do you consider that that is analogous or identical ?—I have some observations to make as to that. The sheep are undoubtedly affected, and they are especially affected where they are housed with cattle, and where they are closed in within a limited space amongst them. The disease is propagated slowly to them by contagion ; in the open air it may not be, and undoubtedly the malady is not of the same fatal character amongst them ; the contagion is not so virulent in affecting sheep as in affecting cattle.

2816. It has been very bad in Norfolk, I understand ?—Yes ; but we cannot be guided by any particular case. I have followed several outbreaks ; we have inoculated sheep in the north, and in three cases the disease has not been induced yet; they have been inoculating them in Holland, and the sheep have had the disease afterwards, but they are not so certainly affected ; if you inoculated oxen, you know that some will be affected and die, but with regard to sheep they may escape.

2817. They might take it from infection, and not from inoculation ?—Certainly ; it is possible, but not very probable.

2818. Do you consider that there is any difference in the appearances of the diseased parts of sheep as compared with oxen ?—There is a very remarkable similarity ; there is more difference observable in the progress of the disease in the animal ; sheep revive more rapidly ; they go on for two or three days, and recover, and then they get over it ; and upon the whole we have not the same fever, or the same virulence, or the same readiness of communication amongst sheep.

2819. A great many cases that I saw in Norfolk were complicated with congestion of the lungs ?—I have not seen such cases as those.

2820. That is not common ?—No ; but had the animals in this case been dosed with anything ?

2821. I cannot say ?—Amongst flocks of sheep I have found that whenever the shepherds begin to tamper with medicine the sheep suffer tremendously.

2822. You look upon the disease as undoubtedly affecting sheep, do you not ? — Undoubtedly ; and from time immemorial people have known that sheep would communicate the disease. But, in 1835, the first observation was made in a supposed case of Rinderpest in a goat. Then some other observations were made ; but in Russia, in the year 1855, they saw the disease amongst the sheep. It was only in 1860 that Dr. Maresch of Bohemia saw it amongst sheep and cattle which were housed together, and in 1863 he wrote a very admirable report upon it, proving conclusively that the disease had affected the sheep.

2823. No doubt you can account for the late period at which it has been known that sheep were affected. From some causes the cattle and sheep were not brought together ?—Clearly. The malady was so universally and justly looked upon as a cattle disease, and it appeared to run such a special course in cattle alone, that the fact of sheep dying seems to have been overlooked at times.

2824. (*Professor Spooner.*) You have expressed your belief that Rinderpest and pleuro-pneumonia are both of them independent diseases ?—Yes ; both of them.

2825. Have you formed any opinion as to where pleuro-pneumonia was imported from ?—We have imported pleuro-pneumonia principally through Holland. The malady has always been kept up in Holland. Holland began to suffer from pleuro-pneumonia when we began to get cattle through Holland. The disease first appeared in the south-east of Holland, and then it gradually spread until it got to Friesland ; and we have constantly been receiving infected stock from Holland, as they are now sending us infected cattle.

2826. Is it your opinion that the foot and mouth disease has been imported ?—Quite so.

2827. From what country do you think it was imported ?—In the outbreaks of that disease that have been so general over Europe from time to time it might have come from almost any part. The foot and mouth disease of the continent could have been easily imported ; but the first instance that I think we had of it was in some cattle that came from Holland to Cork in 1838. The Consul at the Hague imported some cattle for breeding purposes, and the produce of that stock is still to be traced there ; now, perhaps, in the twenty-fifth generation.

2828. Do you think that all these diseases are infectious ?—Yes ; both infectious and contagious.

2829. With regard to the present Cattle Plague called Rinderpest, are you of opinion that that unquestionably was first generated in the steppes of Russia ?—Yes ; I believe that ; at all events we know of its having been constantly there, and incapable of generation elsewhere.

2830. That is, in the steppes ?—Yes ; at all events it is kept up in the steppes. I do not know whether it is directly generated upon the soil of the steppes. There is an absence of facts upon that point, and

there is no doubt that the history as to the origin of Rinderpest in the steppes requires a little working out.

2831. You have spoken of a variety of cattle being herded together in the steppes ; is that so ?—Yes.

2832. Are not the cattle which are bred in the steppes of a peculiar breed ?—Yes ; but the German colonists there have breeds of their own. In Russia they have the pure steppe cattle ; but a general immunity from severe attacks of the plague seems to be common amongst more than the steppe cattle ; in fact, provided the cattle are bonâ fide Russian breeds, they seem, from being acclimatized, to suffer less severely than the others.

2833. Have you discovered any cause for the disease breaking out there, and not elsewhere ?—No.

2834. With regard to vegetation or the want of drainage ?—No. I have no absolute facts that would warrant me in stating that it was so.

2835. You are aware that the valleys of the steppes are very luxuriant in pasturage, while the hills are bare ?—Yes ; but I have formed no theory why it should develop itself spontaneously there. I think that it does not develope itself spontaneously there, and that it is kept up, like small-pox, in the world, by repeated recrudescences of the malady.

2836. Where else do you think that it might arise ? —That I cannot tell you ; but I believe we may class it with hydrophobia and small-pox ; not as originating spontaneously in any part of the world, but as being a transmitted disease.

2837. Have you any reason to give as to why it should not occur in this country like any other extraneous disease ?—My reason for saying that it would not occur is, that it is a disease totally different in its character and in its development and in its progress from any other known disorder that we have ever had in this country ; and then we know that even in former times it has been introduced ; introduce it, and you have it ; do not introduce it, and you keep clear of it. But we have had causes which were supposed to be capable of generating this malady more severely in operation in former times than now, and they did not produce the disease.

2838. That is, presuming it to be the disease ?— Yes ; I should think no one will doubt that now.

2839. Does not your experience enable you to say that of late years diseases have arisen in this country which we in former times knew nothing of, and that in fact the type of many diseases is altogether altered ? — My views are not quite in consonance with those of a great many others on these points. I believe that diseases have been extensively overlooked, and that we have had maladies which have presented remarkable virulence, but of a very definite character, such as the maladies that Mr. Ceely examined into in Lincolnshire ; but those are directly traceable to a definite cause—to the system of farming, to the system of forcing, to rich manure, and to the food which they had, especially in hot seasons. We have had a good deal of splenic apoplexy this year ; we know its causes, and we can produce the disease if we please always under certain circumstances.

2840. Have we not this year had an extraordinary season which was calculated to operate upon the vegetation of the country, and probably through that upon animal life ?—Yes ; but not to produce Rinderpest.

2841. You have spoken of the advisability of not slaughtering animals in the vicinity of animals known to be diseased, although in those animals the disease may not have declared itself ?—Yes.

2842. I presume in that case you consider that the meat of the slaughtered animals would be fit for human food ?—Clearly.

2843. Do you not think that the system of the animal which has imbibed the disease is in a poisoned condition before the symptoms declare themselves ? —No ; I look upon an animal having the disease in a state of incubation as a perfectly sound animal.

2844. Have you had an opportunity of examining any animals that may have been slaughtered in which the disease was in its incubative stage, and had not declared itself ?—Yes.

2845. Have you not in many of those cases detected morbid lesions existing in the stomach or intestines ?—Then they are not in the incubative stage.

2846. If there are no apparent symptoms, must we not say that the disease is in its incubative stage ? —I think not ; if you speak of a dropping of the ears, and a running from the eyes and nose, as being the earliest signs of the plague, I consider that you have animals 24 hours before those signs appear with the ulcerations you have mentioned ; I agree with you in that ; but if you will adopt the proper means to ascertain the very earliest symptoms of the disease, you will not find the ulcerations and the morbid appearances.

2847. Practically speaking, might not a number of animals pass under the observation of our inspectors, however clever they might be, and those animals being at once slaughtered, might you not find lesions giving evidence of the disease ?—Yes.

2848. Where such evidence of the existence of disease presented itself, should you consider the meat of such an animal fit for human food ?—I would let the animal remain hung up for 24 hours, and if it stiffened, and the colour of the flesh was natural, I would allow it to be sold as human food.

2849. What is the result of your experience as to the effect produced by this disease upon the muscular tissues of the body or the flesh ?—There is a very remarkable change which occurs in some of the muscular parts of the body which is described as occurring in typhus, viz., a fatty degeneration which occurs very rapidly in animals that live for a few days, as in human typhus, but I do not regard this disease at all as typhus. In some cases the muscles give way, and by the aid of the microscope we find that a fatty degeneration exists, and an obvious change takes place which causes the meat to acquire a dark colour, and to be tougher when boiled ; it is not so savoury as healthy meat, but otherwise there are no very special characters.

2850. (*Mr. Lowe.*) What is the effect of weather upon this disease ?—I have traced that very much in several outbreaks, and I have found that the influence of weather is really very slight, if anything. I think that upon the whole it is worse in winter weather than in summer.

2851. That is the fact, is it ?—Yes.

2852. Can you account for that in any way ?—It is propagated with greater certainty in winter owing to the fact that the emanations and discharges do not putrify so rapidly and do not dry up so readily.

2853. In very hot countries diseases become perfectly inodorous in a very short time ?—Yes.

2854. With regard to sheep, do you consider that they are a powerful means of spreading the disease among the cattle ?—Yes ; and one of the very earliest outbreaks that I had to treat in London was traceable to some sheep which had been purchased by a butcher at Brixton in the month of August. I referred to the importance of watching the sheep at the beginning, and I have had several cases in which I believe the disease has been communicated by the sheep.

2855. I suppose you would shut up the market for sheep as well as for cattle ?—No ; upon the whole I really should not do so, because the disease is far from being at all of the same importance among the flocks of sheep as among the herds of cattle.

2856. Will not they carry the contagion among the cattle ?—You would very soon have the contagion cease if the markets were restricted to sheep.

2857. You would merely restrict the markets with regard to cattle ?—Yes.

2858. You have spoken of the data upon which the Government could insure the cattle in this country, and that you would derive them from the experience acquired in Hungary ?—Not altogether so, because I

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would derive them also from our own observations as to cattle insurance in this country over a long time. With regard to Hungary and Austria, I would specially refer to the observations made in those countries on the Cattle Plague, because the statistics there are most complete; and it is very strange that in Hungary especially the highest rate of mortality from this disease has never exceeded 5 per cent. for the last 15 years.

2859. In a highly contagious disease like this, do you think that you can reason from a country like Hungary to England?—I think that the danger is materially greater in England than in Hungary.

2860. For what reason?—On account of the greater communication that we have maladies spread more rapidly in this country than they do in many parts abroad; but there is this fact to be noted, that we can carry out preservative measures, I believe, more effectually in England than in Hungary.

2861. In what part of Hungary does the disease prevail?—In the plains.

2862. Where about?—In the great plain between Vienna and Pesth.

2863. Not so much east of Pesth?—Yes; they have it a great deal there, and down in Romania they have it.

2864. Between Costendjie and Czernavoda?—Yes.

2865. In the Dobrudscha?—Yes, it exists there, and down at it has been very bad. I saw it not long ago at Nickelsdorf, about three or four hours' journey from Vienna.

2866. Do you think you could obtain some data upon which to estimate the probable loss that would arise, and which you could place in the hands of an actuary?—As to cattle insurance, apart from the question of the Cattle Plague, we could undoubtedly. As to the Cattle Plague, I think we could make a very shrewd guess, quite safe enough for all practical purposes; and if this plan could be adopted an insurance system could be started on the ground of paying and securing a salvage, paying at first only a half, and then in the event of the funds being sufficient to meet the case, paying, say, another third; I should never advise that the whole of the value of the cattle should be paid, but only two thirds or three fourths of the insurance, and the Government would not lose money by it.

2867. What are your views with regard to the spread of this disorder; do you think it is likely to extend very much?—Yes, I think it is likely to extend every day.

2868. Supposing things to go on as they are going on, and nothing more is done, what is your view as to the destiny of 7,000,000 horned cattle in this country; what proportion shall we save out of them; or will any part of the country remain free from the disease?—Yes; some of the breeding districts will, just as they have of late years remained free from pleuro-pneumonia; some of the hills in Ross-shire, where the black cattle are bred, would remain free.

2869. Into those districts cattle are never imported; they are only sent out?—Yes; upon the whole we should lose many millions sterling in the country, or, in other words, several millions of cattle. I should think that if we leave the malady to propogate, within a tolerably short time we should lose a fourth of our stock.

2870. What calculation are we to make in working out the data for this system of insurance; are we to suppose that the malady is to go on as it is now going on?—No; but that measures are to be adopted, for no system of cattle insurance can live that is not based on proper preventive measures, which at the present time do not exist.

2871. You say that you would recommend a separate market for foreign stock?—Yes.

2872. Why is that?—Because it is absolutely impossible to prevent foreign traders from sending us over infected stock, and which our inspectors cannot discover to be diseased. When I travelled through Mecklenburg, Holland, and Schleswig-Holstein, and into Hanover, but especially in Holland, I found that the instant they discovered the disease they killed out the diseased animals, and sent us over the infected ones.

2873. That would apply, would it not, very much to the markets for fat cattle?—If you have animals that are not to leave the market alive you can mix them.

2874. You speak now rather of a permanent regulation, do you not?—Yes.

2875. It has been suggested that if you were to keep foreign cattle separate from home cattle it would stop foreign importation on the ground that the dealers would consider they had not sufficient competition amongst the buyers; you do not think that that would be so?—No; they should have a separate market for them, because they are so much needed now that they can very easily sell them.

2876. (*Mr. Read.*) As a matter of course, a large arable district like that of Norfolk, which requires a great number of cattle from other districts to graze in it, will never be free from this Cattle Plague unless something is done?—No; we have had that exemplified in the history of the lung disease or pleuro-pneumonia in Norfolk, in Fife in Scotland, and in Meath in Ireland; they have always had it, and they have always kept it up.

2877. Would not very heavy rains have a tendency to wash the virus out of the excreta into the earth?—Yes. I believe that water is a great purifying agent.

2878. If the virus is dried up by very hot weather, does it cease to become infectious?—Yes; it loses its power in that way very soon.

2879. (*Mr. Lowe.*) With regard to lean cattle coming down from the breeding districts, would you approve of that?—Certainly, to supply farmers with stock.

2880. You would see no risk in driving them?—There would be some, but I cannot see how it is possible to prevent it.

2881. Would you allow farmers to purchase from each other at any distance?—Yes.

2882. Or from cattle dealers who drove cattle about the country?—Yes; you could not help yourselves I think.

2883. Why do you think it necessary to kill all the animals that are affected with the disease?—Because if we keep the animals in life, and if we continue the disease over a period of time, it is impossible to prevent extensions of it in various directions, and I think we have had that beautifully illustrated by the case of Edinburgh during this outbreak. There they had been most vigorous in the way of treatment, having sanatoriums constructed, and curing the cattle in the sheds, and the result was that the disease was in a shed while two or three sheds near to it were free from it for a week or two; but as they went on treating the malady, it at last spread to the other sheds; and there is nothing like killing out the centre at once, so as to prevent contamination.

2884. You do not think that your recommendation as to doing away with the markets and fairs would of itself be sufficient?—No; you must have a control of the outbreaks, and you must publish them as they do in Mecklenburg; they give publicity to all contagious diseases; it is important that the largest amount of accurate information should be obtained as to them.

2885. The public complain very much that at the present time many of the inspectors are not qualified to decide upon a matter of so much importance?—It is perfectly easy to have additional inspectors appointed, men who are perfectly fit for the work, and to go about the country to help, and guide, and advise.

2886. Do you believe they are to be found?—Yes; of course they are. I merely state this with regard to a method of general inspection over the country, in watching the operations of the other inspectors. We certainly could find very efficient men, and a sufficient number of them; if you come to parcel out

the country into districts, plenty of qualified men for certain districts could be found.

2887. Would there not be rather a difficulty in working out such a system as you recommend ?—No ; *not* altogether. I think that men tolerably competent could be chosen who could be made to attend to their own special duties.

2888. Do you not think that the farmers would be rather subject to having their cattle slaughtered at the wills of these persons, and then would be prohibited for a certain time from the circulation of cattle ?—Yes ; but you cannot totally stop the circulation of stock, and I think they would have no reason to complain if we had a system of inspection combined with a proper insurance system.

2889. Why is it that you think we ought not for a month or six weeks to stop the circulation of cattle in the country other than in the large markets ?—From a commercial point of view, the amount of capital thrown immediately idle would be enormous.

2890. In what way ?—People want their money at certain periods to pay rent, and could not get it; they could not sell their cattle.

2891. I am supposing that you allow the fat cattle to be sold ?—In a large number of the farms the farmers, having nothing else to depend upon, they depend for their existence upon the sale of store animals, and they have no food with which to keep them on.

2892. Can you mention any other reason ?—I think there is really no sound objection to the movement of store cattle, except through the markets. We understand that that may, to a certain extent, have a tendency to propagate the disease, but if there is a stringent rule laid down as to the warranty of those animals, or if the sellers could be punished for selling diseased cattle, I think, as far as store stock is concerned, it is not desirable to interfere with the circulation.

2893. Supposing we have no confidence in the insurance system, or in the slaughtering system, is there anything left us besides that ?—Not to my knowledge ; certainly no system of medical treatment in sanatoriums, or that sort of thing.

2894. (*Chairman.*) You spoke just now of isolating cases of disease in districts that were infected ; has not the disease spread almost too much in England for such a system to be practically carried out ?—It is dying out of some districts, and it is appearing in certain fresh ones; but I think it is still possible to control it to a certain extent ; of course the right moment was lost ; the opportunity was lost because the disease should have been suppressed at first.

2895. (*Mr. Lowe.*) How could you isolate a district with a railway running through it ?—It is a very difficult matter to do it. In Wiltshire we succeeded; in the year 1862 stock was not allowed to leave the district or to enter it; it was during the prevalence of the small-pox epidemic ; and in three weeks the disease was suppressed.

2896. (*Mr. Read.*) You would not allow animals from an infected district to leave it, although you would permit the circulation of store stock ?—Clearly not.

2897. (*Chairman.*) Do you believe that Lincolnshire is free from the disease ?—I am not aware of the fact, but I believe it is ; so far as my information has gone it has remained free ; but we have an admirable instance of that in Ireland ; there is no doubt that there is no disease in Ireland, which proves, I think, how much can be done by preventing the propagation of the disease.

2898. What measures would you adopt with reference to Ireland; do you think it is important that the Government should issue certain regulations to meet the possibility of an outbreak occurring there ?—Clearly, and have it killed out instantly, and do as they have done in France and Belgium, kill out the centres of infection forthwith.

2899. Do you believe that a certificate or bill of health, given by an inspector, can be depended upon to prove that an animal is not infected ?—There are circumstances under which, if you had men that performed their duty properly, such a bill of health would be of value ; for instance, I have this morning inspected two bulls which are to be exported from England ; but I would not have given a clean bill of health for those animals had I not known how they had been brought from the farm on which they had been brought up here, and that both of them were put into a perfectly new van which had never been touched, and I gave a clean bill of health for them.

2900. A very efficient and large staff of inspectors would be required ?—Clearly ; and if they had been appointed when I wanted them to be appointed we should have had them now.

2901. Do you think it important to appoint in each county an inspector to inspect and superintend the other inspectors ?—I do not suppose it would be necessary to have any supervision in the counties ; in some cases there would be very little to do, and in others there would be much more to do.

2902. With regard to getting rid of the disease in the metropolis, do you think it would take some considerable time to eradicate it from the cowhouses in the metropolis ?—It would have taken no time to do it at the commencement ; but now of course it would, although they have been cleared out so much by the disease that I think it cannot last for an indefinite period of time in London ; in some places two thirds of the animals are now dead ; they have died or they have been killed. A large number of people have tried to keep them, and everybody has striven to do what they could.

2903. The sheds must be free from cattle for sometime before it would be safe for other cattle to go into them ?—Yes.

2904. (*Mr. Read.*) Do you consider that the cowhouses in the metropolis are good or bad institutions ?—I hold that no large city can do without cowhouses ; but these should certainly be put under a proper system, for they are absolutely essential, and far less detrimental, if properly conducted, than many manufactories that you have in towns. I have followed this subject up very much. I once thought that cowhouses should be abolished in towns ; but upon looking into the matter I found that the necessity, especially with regard to the infant populations of large towns, absolutely called for a proximate supply of milk ; you cannot get it from the country over a considerable part of the year at all in a fit state.

2905. (*Viscount Cranborne.*) Have you made this a subject of special investigation ?—Yes ; and I am now quite against the total abolition of town cowhouses wherever you have so large an area as that of London, for it would be attended with considerable evil. It is a very remarkable fact that the milk produced in the metropolis, however filthy the cowsheds may be, is worth to any retailer one penny a quart more than the wholesale price of the country milk.

2906. Is that on account of its superior quality ?—Yes ; it is obtained immediately after being drawn from the cow, without the cream being separated from it, and it has not undergone any shaking or churning, so that it is not deteriorated at all.

2907. (*Mr. Read.*) Do you consider that head inspectors are at all necessary in the provinces ?—I think that the Privy Council ought to have pretty active supervision over the men in the country, in order to prevent hardships to the farmers, of which the farmers have occasionally to complain ; there is no doubt of that.

2908. Would you have any head inspectors in the provinces over a certain district, in order to teach the other inspectors their duties, besides the supervision of the Privy Council ?—No. I tkink probably it would not work well. I think that if the Privy Council had several men whom they could send over the country, that would probably answer better, just in the same way in which the police are inspected.

2909. (*Chairman.*) Is there anything else to which you wish to call the attention of the Commissioners ?

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—What I would specially wish is, that immediate attention should be paid to the abolition of the horse-slaughter places, so far as the cattle are concerned, near the Metropolitan Cattle Market. Then I think that there is really scope for a little more experimental investigation upon the subject. We have been working in the north, but of course these things are very expensive, and fall heavily upon private purses, but there are many points in connexion with this subject deserving investigation. I have been asked several questions, but I feel that it is impossible to give definite answers to them without having made more experimental investigation, and there are things that really ought not to be delayed.

2910. Those experiments would necessarily, I presume, take up some time ?—Yes ; and that is why they should be conducted as soon as possible.

2911. But you do not think that action should be delayed till they are over ?—Clearly not.

The witness withdrew.

Mr. R. Stroyan.

Mr. Robert Stroyan examined.

2912. (*Mr. Read.*) I believe you are a large farmer and cattle dealer in Norfolk ?—Yes.

2913. Residing near Norwich ?—Yes.

2914. In the usual course of your business, how many cattle have you probably disposed of in the course of a week ?—Say about 8 or 10 score during October and November.

2915. Have you disposed of almost all of them on Norwich Hill ?—Yes, on Norwich Hill, and at home on my own farm.

2916. Have you had any outbreak of the cattle plague recently on your own farm ?—Yes.

2917. When did it first break out, and state how fatal it has been ?—The first time that I observed it was last Wednesday morning, among a lot of 34 cattle, 24 of which all died, and now ten more are killing to-day ; they are affected all but one or two. I have no doubt they will be all dead before to-morrow night. I am killing them to prevent their dying.

2918. Have you had any experience of a goat taking the plague ?—Yes ; about two years ago a gentleman at Norwich gave my children a goat ; it was a favourite, and it ran in the yard in the winter and in the fields in the summer. My steward said to me on Saturday morning that the goat was ill, and I said, "Never mind the goat;" but yesterday morning he told me that the goat had got the plague. I then sent for Mr. Wells and Mr. Whitwell, and two surgeons, Mr. Cadge and Mr. Nichols ; they came and saw this goat, and they found that it was in a very bad state of plague indeed. Mr. Wells and Mr. Whitwell said that they had never seen a more distinct case, and the poor goat was dead this morning.

2919. Are you perfectly sure that it caught the Cattle Plague from your cattle ?—I am quite certain of it ; it was perfectly well, and it had never been off the farm for two or three years.

2920. How did your oxen catch the Cattle Plague ?—I cannot tell ; my cattle had been within perhaps a quarter of a mile of Mr. Harvey's cattle at Norwich, where there has been a good deal of the plague among the cattle.

2921. How far are you from Mr. Wells's ?—About 200 or 300 yards.

2922. Mr. Wells has lost a cow, has he not ?—Yes; last Sunday week, I believe.

2923. Had the carcases of some of your cattle which had been affected with the Cattle Plague been passed by the inspectors and sold for human food ?—Yes.

2924. In your opinion are they perfectly good ?—Perfectly so ; in fact, Mr. Cadge, who is a very good judge, says that he would not mind eating any one of the 23 that were dead. Eleven would not pass ; they died before we could kill them ; the others that were killed bled, and were passed for food, and they came to London. I sold them to a butcher, provided the inspector would pass their carcases for food.

2925. As a matter of course the closing of the store markets and fairs would be very detrimental to your own interest as a dealer ?—Possibly it might be so for a little while, but I would rather put up with the inconvenience for three or four weeks than suffer for two or three years.

2926. What is your opinion as to the desirability of closing fairs and store markets ?—I think that we shall not get rid of the disease without doing so. So long as the cattle are driven from one market to another we never shall get rid of it. I do not believe that the weather will have any effect upon it.

2927. In addition to stopping all store markets and fairs, would you stop the entire transit of all store stock ?—No, I would not.

2928. How would you deal with it ; would you allow one farmer to buy from another ?—Yes ; that is what I should recommend. Our farmers in Norfolk are not very willing to go far from home, if they have confidence in any of their friends to whom they can go, to buy cattle. If any friend of mine wanted a lot of cattle, and wished me to get them, I should go into Lincolnshire, and purchase them off a sound farm, with a warranty how long they had been there and sound. I think it must be done in some way of that sort. It is impossible to keep all the cattle in Lincolnshire, because at this season of the year they want to part with them, and send them into Norfolk, and we want them in Norfolk to consume our roots.

2929. What, in your opinion, would be the effect of stopping the cattle traffic now ?—I think that one effect would be that they would starve the cattle in Lincolnshire, and the other effect would be that we should be starved for want of cattle in Norfolk, and our turnips would rot.

2930. You think that it is the congregation of cattle in markets that is to be prevented ?—I think it is the congregation of cattle together in unprincipled men's hands ; that is the evil, and we shall never get rid of it so long as the public markets go on, for A, B, and C will bring cattle to the market, and one unsound animal will pollute 500 sound ones.

2931. You see no great danger in traffic being carried on from one farm to another ?—No, with careful management.

2932. What is your opinion as to fat markets ?—I think you cannot stop all fat markets.

2933. Would it be any hardship to stop the fat cattle market on Norwich Hill ?—Not at all.

2934. Why ?—Because Norwich Hill is not much of a fat cattle market at any time ; they are generally brought there to be sold to dealing men, and to come to London, and they may as well come through direct to London ; the cattle all come that way, and the farmers would not suffer, nor the dealing men either.

2935. You think that the butchers in Norfolk might do as they do now generally, that is, buy direct from the farmers ?—Yes, every one ; you can scarcely find a Norwich butcher who does not go and buy his beasts from the farmer, and brings them home as he wants them to kill.

2936. If an order were issued that the cattle should not leave a farm, but that they should be slaughtered there, would that, in your opinion, be a very great hardship ?—Yes ; and it would be a great hindrance. I do not see that that is necessary, because fat cattle are different from lean cattle. I do not think that the disease affects cattle in the course of a day or two ; it wants time ; and they are quite fit now to get from the farmer's yard to London before they get affected.

2937. Supposing that the Metropolitan Cattle Market was kept open, you would of course have all the cattle that entered it slaughtered there ?—Certainly ; in the city of London. I should not allow them to leave London alive, to go into the provinces, for that would be a means of carrying the disease about as fast as it could be done.

2938. I understand you to suggest to the Commission that it would be very desirable to close all store markets and fairs, and all markets for fat cattle in the country, and to keep open none but a few large markets for fat cattle in the kingdom, and that all cattle that entered those towns or cities should not leave them again alive ?—Yes, certainly ; I see no other mode of getting quit of this calamity.

2939. You think that the stoppage of the transit of all stock would be a great hardship, a great national inconvenience, and a loss ?—I think it would be a great detriment to all concerned, for we must have cattle into the county in the most healthy and best way that we can get them.

2940. The majority of the Norfolk farmers have not bought their store cattle now ?—I think not.

2941. The season has hardly arrived, and the farmers have been very much frightened ?—I think that Norwich Hill was more paralysed last Saturday than it has been yet.

2942. What was the effect that you observed last Saturday ?—I observed that the spread of disease had a tremendous effect. I think that the farmers were quite paralysed, and they would not buy.

2943. How many were offered for sale ? —No more than 300, or under that.

2944. What would be the general number on Norwich Hill on Saturday in the middle of October ? —We have never been able to get at the number until lately, and I am not exactly certain.

2945. A couple of thousand ?—2,000 or 3,000.

2946. Have you any other recommendation to make to the Commissioners ?—I am not certain that I have ; but I think that the Norwich Market, that I am so much connected with, is the principal store market in England, and I think we want to get that shut at once.

2947. I suppose you would not recommend that one or two markets should be shut up, but the whole of them ?—It would be of no use otherwise, because one leads to the other, and they still keep the disease hanging over ; to keep the cattle as isolated as much as possible is the only way that I can see.

2948. Should you think it any great drawback to the trade of the country if no cattle were allowed to pass through a certain infected district at the present time ? Suppose that a line was drawn round that infected district, and an order was issued that no cattle should leave it, would that be a great hardship ?—It would be a great hardship, supposing a man had two farms lying together—one infected with plague, the other sound ; it would prohibit him stocking his sound land. I think that stopping the markets would have the desired effect ; it would keep me, as a dealing man, and others, from exhibiting cattle at the public markets, and congregating them together so as to take the disease.

2949. (*Dr. Quain.*) The market at Croydon was prohibited the other day, and the cattle market was held in an adjoining field ; how would you prevent that ?—I think you would require a different clause for that. It ought to be prevented, and that would be a step in the right direction, and even if they were shown a mile or two distant from Norwich a dealer would not allow everybody to go there if he had sound cattle. I think that the disease is kept up by unprincipled men, and that they would be at once obliged to give up dealing in cattle for a time.

2950. (*Mr. Lowe.*) Suppose a man had the disease on his farm, would you allow him to take the cattle that did not appear to be infected, and drive them off in search of a buyer ?—No; that is disallowed already. The rule that we have in Norwich is such, that no cattle can be taken off a farm where disease is, without the sanction of the inspector.

2951. Suppose the inspector knows nothing about it ; if a farmer sees that the disease is breaking out he will be anxious to get rid of the cattle ?—That is what I now wish to stop, because if the market was stopped these cattle could not be sold.

2952. Might he not sell them to somebody else; you would permit that, would you not ?—No, I would not.

2953. I am supposing that it is not known that the disease is on his farm, but that he knows it or suspects it ; would not your plan enable him to send those cattle off the farm, and sell them, and so propagate the disease ?—I think that in a case of that sort, if there was anything wrong with the cattle, the inspector ought to be sent for ; he ought to know of it.

2954. But suppose a man does not send for the inspector ?—It is not a very easy matter to conceal it for more than a day or two, and another thing is, that I think no man would dare attempt to do it, because the cattle would probably die, and on the following day it would be found out.

2955. Not if the animals were in an early stage of the disease?—It appears that they incubate this disease for six or seven days. I cannot tell the period of incubation.

2956. They might be put upon a railway, and be sent a hundred miles, and then removed and sold, not in a market ?—There would be very great danger of propagating the disease.

2957. (*Dr. Playfair*). You have stated that you would approve of fat cattle being sent to the markets ? —Yes.

2958. Would there not be the danger of unprincipled persons driving to the markets for fat cattle animals that were in the first stages of the disease ?—It is just possible that there might be a chance of unprincipled persons doing it, but at the same time these cattle going into a fat market would at once be killed and done with.

2959. Might not a herd of store cattle pass over the same roads that these diseased cattle had been driven along, going from one farm to another ?—I think it is a very difficult question to deal with.

2960. Under these circumstances, if you allow the transit of cattle, might not your store cattle receive the disease ?—Yes ; any cattle walking over the road after diseased cattle would be likely to take the disease.

2961. Does not that make you doubt whether if you permitted the transit of cattle at all you would have much chance of stopping the disease ?—It is a very doubtful question, and one that is very difficult to deal with, but I think it would be a step in the right direction if all public markets, except those of London, Liverpool, and Manchester, were done away with, and if the cattle were all killed in these various places I think you would find that you would get rid of the disease in a few months ; that is my own opinion. I am perfectly certain that it is now only commencing, if the store markets are allowed to be kept open.

2962. (*Mr. Read.*) For how long would you shut them up ?—I think for two or three months; not less. I would try it until the 1st January.

2963. (*Chairman.*) Are you acquainted with a case which occurred at Wells in Norfolk of the Cattle Plague ?—I am not.

2964. You did not hear that it was reported that a farmer at Wells had bought near Fakenham some cattle the owner of which said that they had been on the farm for six weeks, and it was afterwards discovered that they had come from the London market ?—I did not know that.

2965. You did not trace the origin of the disease in your herd ?—Not at all ; some of my cattle I have had since the month of May, and some of the last I bought on the 8th of August.

2966. Generally speaking, in Norfolk, whence do you believe the disease came ?—I never had any doubt about it. I think it was imported from Russia.

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2967. Not directly into Norfolk?—No; it came from London to Norwich. I have no doubt of that.

2968. Have you any evidence as to the increase of the cases of disease in Norfolk since the time of the prohibition has expired?—No evidence. I never attended a meeting until Saturday; but I found the general feeling of the meeting was that it was extending very much; I should think five or six new cases last week.

2969. (*Viscount Cranborne.*) Do you find that the change which has taken place in the temperature has diminished the rapidity of the spread and the intensity of the disease?—No; I have not seen that effect yet.

2970. (*Chairman.*) Do you believe that very great inconvenience would occur if all movements of cattle were prohibited, and the cattle were killed on the farm?—There would be very great inconvenience. I think it is almost impossible that such a thing could be done. I think it would ruin certain farmers if there were not certain cattle to come into our county to graze; and cattle of the value of 20*l.* or 21*l.* to graze would not make over 14*l.* or 15*l.* a head to kill.

2971. Is there anything else you wish to suggest?—I think you would do the best thing you could do to shut up the markets as soon as you can.

2972. (*Viscount Cranborne.*) Will the butchers suffer much if the store markets are shut up?—No. The only thing is that the cattle are bought by dealing men at Norwich, and sold to London dealing men, and these cattle might as well go direct to London. It would be a matter of no loss to any party, provided they were not shown in any public market. Let them come to any fat markets and be sold.

2973. Would you stop the importation of cattle into Harwich?—Yes; that is the first thing I would endeavour to stop.

2974. (*Mr. Read.*) Would you stop the importation of cattle into London?—No; I would stop no importation if the cattle came there to be slaughtered.

2975. You do not think that in the transit of fat cattle from the provinces to London there would be any danger of largely spreading the disease?—No; and that is the only way that you will find of getting this disease under.

The witness withdrew.

Adjourned till to-morrow at 12 o'clock.

Tuesday, 17th October 1865.

PRESENT:

Earl Spencer.	Dr. Quain.
Mr. Lowe.	Mr. Wormald.
Dr. Lyon Playfair.	Mr. Ceely.
Mr. Read.	Professor Spooner.
Dr. Bence Jones.	

EARL SPENCER IN THE CHAIR.

Mr. James Higgins examined.

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2976. (*Chairman.*) Will you state what position you hold at Leeds?—I am an inspector of meat, and I have also been appointed by the Mayor of Leeds an inspector of cattle under the Order in Council.

2977. Are you a veterinary surgeon?—I am not. I am a butcher by trade; I have been eight years inspector of meat.

2978. Are you still engaged in trade as a butcher? No; I devote the whole of my time to the duties of my office.

2979. Have you had any special veterinary education?—None whatever. I may say that the Mayor of Leeds has also divided the borough of Leeds into three districts, over which he has appointed three veterinary surgeons — Mr. Dray over No. 1; Mr. Cuthbert over No. 2; and Mr. Broughton over No. 3. I being an inspector of cattle have to attend to those gentlemen, and to my other duties as inspector of meat.

2980. Do you inspect live cattle as well?—I inspect live cattle as well as dead carcases.

2981. Have you power yourself to condemn an animal on account of its having the disease?—Yes.

2982. Without calling in the assistance of one of the veterinary surgeons?—Certainly.

2983. Is the Rinderpest very prevalent at this time at Leeds?—It broke out in the neighbourhood of Leeds about seven weeks since, in some pastures called Thorpe Hall pastures; they are just out of the borough of Leeds, and in the West Riding district.

2984. Do they come under your inspection?—They do not.

2985. Are you familiar with the circumstances of this outbreak?—I may state that they are pastures where stock are taken in for summer grazing; there are upwards of 100 animals generally grazing in those pastures. The first case which came to the knowledge of the authorities of Leeds was the case of a bullock, a foreign animal, which belonged to a butcher in Leeds, which had been grazing about three weeks in those pastures; it was taken ill, and the butcher went and fetched it in a cart; it came into one of our slaughter-houses in a dying state.

2986. Was it through this bullock that the remainder of the animals on this pasture were infected?—It was through this bullock that the authorities in Leeds and the West Riding magistrates appointed inspectors. When I saw the bullock I thought that it was a very peculiar disease, such as I had never seen before, and I called the attention of Mr. Dray, a veterinary surgeon, to it, and upon examination he was of opinion that it was a decided case of Cattle Plague.

2987. Can you tell the Commission how in your opinion the Rinderpest came to this herd; what was the origin of it?—I believe that this bullock was the origin of the Cattle Plague in those pastures.

2988. Had he been recently in any public market in contact with diseased animals?—He had been brought over with a lot of foreign animals from Hull, and was sold in the Leeds cattle market about three weeks previous.

2989. Did he show signs of illness before he fell ill in the manner which you have described?—No; he only showed signs of illness about three or four days before he was slaughtered.

2990. Then is it your opinion that he had the disease in him when he arrived from Hull?—I believe that that animal introduced the disease into those pastures.

2991. To whom do these pastures belong?—I think

that they are the property of Mr. Ingram of Temple-newsam.

2992. (*Mr. Ceely.*) That bullock came with some other animals?—There were two others with him; they were three foreign bullocks.

2993. (*Chairman.*) How many animals are pastured on this Thorpe Hall pasture?—More than 100.

2994. And did many other animals fall sick of the Rinderpest?—About some 50 have since died from the Cattle Plague in those pastures.

2995. Is there anything peculiar with regard to these meadows, such as drainage?—There is.

2996. Will you state what that is?—The pastures lie on the River Aire; they run a long way on the River Aire. The river at that point receives the whole of the sewerage of Leeds.

2997. (*Mr. Read.*) Just before it waters these meadows?—Just before it runs along these meadows.

2998. (*Chairman.*) Are the animals able to drink this water?—Yes; they have access to the river at all times.

2999. Had there been no diseased animal slaughtered in Leeds prior to this outbreak at Thorpe Hall pastures?—Not diseased with the Cattle Plague, that I am aware of.

3000. I suppose that the drainage from the slaughter-houses would fall into the river?—The whole of the drainage of the drainage district of Leeds goes into the river at that point. I think that I shall not be wrong if I venture to state that there is plenty of water to drink. In my own opinion the river is in such a state that no animal will drink the water.

3001. You do not think that polluted water was the cause of the animal falling sick of the disease?—I do not, for this reason; these pastures lie low, and at certain times of the year they are very liable to produce disease. I will say that there is disease at certain seasons of the year, I believe, in those pastures; but more particularly a disease which we butchers call the milt complaint, or splenic apoplexy.

3002. Has the disease spread much in Leeds?—Up to last Saturday we had only had ten cases of Cattle Plague in animals brought into the borough, eight of which were cattle which had been imported into Leeds out of these pastures; they were brought by the owners to the slaughter-houses.

3003. Has the Mayor of Leeds taken any steps with regard to the stoppage of the markets and the fairs?—He has not.

3004. Has that point at all come under your consideration?—I think that it has not at present.

3005. Have you formed any opinion yourself as to the desirability of stopping the fairs and markets?—Do you mean both the fat-cattle fair and the dairy-cow market?

3006. All fairs of live stock.—I think that it would be desirable that the dairy-cow market should not be held at all at the present time.

3007. Is there a large dairy market in Leeds?—Yes; pretty large. It is held on the Tuesday, and the fat-cattle fair is held in the same place on the Wednesday, the day following.

3008. Is there any market at Leeds for store beasts?—At the Tuesday market both dairy cows and store beasts are shown.

3009. Would you stop the store market as well as the dairy market?—On the first introduction of the disease into these Thorpe Hall pastures, I recommended, in a letter which I wrote to the chairman of the market committee, the removal of the dairy-cow market into a field which is the property of the corporation. However, that has not been done. The markets committee are taking steps to divide the market, and have a separate portion of the market set apart for the showing of foreign cattle; they are now erecting pens for that purpose.

3010. You would be opposed to the shutting-up of the fat market?—Ours is a very large market, and I do not know how our butchers would get their supplies of cattle; it is almost a West Riding market. I am afraid that we should have 20 or 30 markets, as it were; the cattle dealers would bring cattle for sale into the slaughter-houses, and I think that it might be attended with more danger than allowing the butchers and the cattle dealers to meet in the cattle market; for this reason, I think that if the fat cattle were exposed for sale in the open market they could be subject to a better examination than if they were spread into 20 or 30 slaughter-houses. In a great many cases they might be brought into those slaughter-houses, and never be inspected at all.

3011. Some of the witnesses before us have suggested that all movement of cattle should be stopped, and that the cattle should be slaughtered on the farms where they are grazed. Do you think that that would be practicable?—With regard to the borough of Leeds, more than half of our supplies of fat cattle are foreign animals, arriving from the port of Hull, and from Hartlepool, and Newcastle.

3012. But if arrangements were made at Hull, and Hartlepool, and Newcastle, for slaughtering foreign cattle as they arrived, would it not be practicable?—They would be of no use whatever to the trade of Leeds. Supposing that they were slaughtered in a very eligible and a very convenient slaughter-house, my experience as a butcher is, that if the carcases were sent to Leeds, they would be to a great extent so much deteriorated, and especially if we had what we call soft muggy weather, that in many cases the carcases would lose their value to a considerable extent.

3013. Would the same remark apply to the home trade?—I think so. I think that if slaughtering took place upon farm premises, the farmers generally not having proper accommodation to slaughter their cattle, they would be slaughtered and sent to market in a state which would be of no possible use to the farmer or to the butcher.

3014. Do you not get any supply of dead meat from Scotland?—No; we send out of Leeds a very large quantity of dead meat to London.

3015. Why could not other towns send dead meat to Leeds?—They are sheep and lambs; no beef is sent, because it cannot be sent up in a proper marketable condition which will make it profitable to the owners.

3016. Does not a good deal of Scotch beef come to London dead?—I believe so.

3017. In what state are the slaughter-houses in Leeds?—The slaughter-houses in the borough of Leeds are all registered. We have about 150. We have six very large slaughter-houses capable of slaughtering from 200 to 300 head of cattle, besides small goods.

3018. From 200 to 300 in a day?—Yes; we almost look upon them as public slaughter-houses, though they belong to private individuals.

3019. Are those slaughter-houses adjoining the cattle market?—No; they are in the centre of the town, just beside the butchers' market.

3020. Do you consider that they are in a satisfactory state?—Yes; they are regularly visited once a week; they are all kept in a cleanly state.

3021. Have you had many diseased animals seized in the market?—Do you mean the live market or the dead market?

3022. The live market?—We have not seized any in the live market as yet. When I mentioned about the outbreak of Cattle Plague in Thorpe Hall pastures, just out of the borough, I was going to say that last week we got information that the Cattle Plague had broken out at Moretown, about four miles north of Leeds, in one of the most healthy districts of the borough of Leeds.

3023. Was that traced to the market of Leeds?—I have not been able to trace it satisfactorily. These are dairy cows. The disease is on some six premises, and the owners told me on Sunday that they blamed 12 Irish beasts which had been taken out of Leeds market three weeks last Wednesday, and had been put into a field at Moretown, near to the farmer's stock who had been the severest loser by the Cattle

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Plague. Whether rightly or wrongly, he blames these 12 Irish cows. I may state that when I was inspecting in the cattle market three weeks last Wednesday, I saw these 12 beasts; and I had information (I have not been able to ascertain whether my information was correct) that these animals had been brought from the neighbourhood of Wakefield, and that they had been herded with some infected stock. I thought it my duty to have these animals set apart, and they were taken and put into one of the cattle-sheds, and I called in the three veterinary inspectors for Leeds to examine them. They examined every one of the animals, and they passed them as being free from the disease; they were taken to Moretown. I may state that a person of the name of "Wells," who lives just out of the borough, has lost six animals last week, and a person of the name of "Marston" has lost three, and the fog fields, where the animals were, are between the two farms; they are not above 150 to 200 yards distant from one another.

3024. (*Mr. Read.*) By "fog" field you mean grass field?—Yes.

3025. (*Chairman.*) You have stated some cases which appear to have carried the Cattle Plague from Leeds market; how would you prevent such a thing happening again?—I do not know how it could be prevented.

3026. It has been suggested that cattle should only be sent to market for the purposes of slaughter, and should not leave the town alive; would that be practicable at Leeds?—I do not believe that it would be practicable.

3027. At the present time cattle are bought by a butcher, and they leave Leeds alive, and are kept by that butcher until he requires them at his own place?—That is as regards the cattle dealers; but Leeds is bounded on three sides by an agricultural district, and the farmers themselves bring cattle to sell. I think that it would be impracticable for the farmers to bring them to the slaughter-houses, and then sell them to the butchers after they are slaughtered.

3028. I did not mean that they should go straight to the slaughter-houses, but should go and be sold at the market as now, but that instead of being taken away alive to different parts of the country they should be slaughtered in Leeds, because the disease is very often spread by animals coming to an infected market and taking the disease away to other districts?—I understand the question perfectly. Last Wednesday a number of cattle were turned out unsold from our cattle market. I am afraid that they will take and spread the disease elsewhere. It would be very desirable, if it could be done, not to allow any cattle which have once been exhibited for sale in any cattle market to return to their homes, but to compel the sale of them. We have a case exactly in point. Last Wednesday my attention was called to a beast by the owner, which was up at Woodhouse. I took a veterinary surgeon with me, and at once we found that the animal was labouring under Cattle Plague. It was the only animal which the person had, and unfortunately that animal had been exposed for sale in the Leeds cattle market 14 days previously, and had been turned out into a field; it became ill on the Sunday and died on the Thursday, or rather it was killed. If that man had been prevented from taking his cattle out of the market, and putting them into a pasture, no doubt the animal would not have taken the disease, and the man would not have suffered the loss of his animal.

3029. Then you believe that it would be practicable to prevent animals once sent to the Leeds market leaving it again alive?—Yes; I think it not only practicable, but desirable.

3030. (*Mr. Lowe.*) You would keep markets for fat stock still, as I understand?—Yes.

3031. You would of course allow cattle to be driven and sent to those markets?—Of course.

3032. Supposing that a man wanted to move his cattle from one place to another, and not really to send them to the market, but were to say that he was moving them with the intent of sending them to the market, how could you prevent that?—I do not know how it could be prevented.

3033. Does not that permission give a facility for moving cattle all over the country, under the pretence of sending them to the market?—Certainly it would do so. On the same principle, if they were sent from a farm direct to a slaughter-house.

3034. They might make a pretence of that; they wanting to do something else?—Yes.

3035. And that would apply to every permission to remove animals?—It would.

3036. Is beef worse to carry than mutton; is it more deteriorated by the railway journey?—Yes; considerably.

3037. From what does it suffer?—It is very difficult to pack. If you take a carcase of mutton, taking these London hampers, which are provided by the railway companies, for the sheep or lambs, you can put from 10 to 15 sheep or lambs into those hampers, and they will generally arrive in London not much worse, if any; but it is a different thing to pack four quarters of beef, which may weigh from 10 to 15 stone a quarter, into a hamper; there is a difficulty in it; they are bad to lift, and when I am at the railway station I see that they are knocked about, and they have not the means of lifting them on to the vans, and they are tumbled off the van into the street when they arrive at their destination, and very often they are very much deteriorated.

3038. Then the difference is principally on account of their greater mass and weight?—Yes.

3039. It is not from anything in the quality of the meat, but from their being so much larger, and more unwieldy, and therefore being more knocked about?—Yes; and if you pack four quarters of beef, you cannot pack them and send them in the same condition as a hamper of sheep or lambs.

3040. From their greater size?—Yes; from their unwieldy bulk. It has been tried many times by our butchers to send up carcases of beef, but it never pays them; they always lost money by it.

3041. (*Dr. Playfair.*) If it is true, as it has been given us in evidence, that beef arrives in good and sound condition from Scotland, to the London market, is there any reason to apprehend that beef would arrive from Hull to Leeds in worse condition?—I cannot conceive that in summer time it can arrive in good condition out of Scotland, in hot weather, or in what we call soft and muggy weather.

3042. Taking from now till the end of January, would there be any difficulty in getting the slaughtered foreign beasts arriving at Hull as dead meat to Leeds?—It would depend to a considerable extent upon the manner in which the railway company packed them. I think that they might come, in what we call sides of beef, in proper carriages, without being much deteriorated. I was speaking of sending them up in four quarters, and packed in one of the London hampers; putting four quarters of beef in a hamper. I think that if it was thought desirable to slaughter the animals at Hull, which are intended for Leeds and the West Riding market, if they were sent in whole sides, they might not be very much deteriorated in value.

3043. (*Mr. Lowe.*) That means half the animal?—Yes; the animal just cut in two.

3044. (*Mr. Read.*) How would you send these sides?—They could be packed better than quarters, if they were properly managed.

3045. But not in hampers?—No, not in hampers; there ought to be a proper vehicle for sending them in.

3046. (*Dr. Playfair.*) You have said that the animal which introduced the plague into the Thorpe Hall meadows had been bought three weeks before at the market of Leeds?—Yes.

3047. Is it not the prevailing opinion at Leeds that these cattle acquired the disease by drinking the sewer water?—I believe that some people hold that opinion.

3048. Have you seen many instances of the plague yourself?—Since its introduction into the borough of

Leeds I have seen about a dozen cases, until last week. I have seen some eight or nine cases last week in the borough of Leeds.

3049. Have you ever heard in your neighbourhood of one animal giving the disease to another at such a distance as three weeks ?—No.

3050. There is, however, no means of accounting for it, in your opinion, except by that animal ?—No. We had a third case, which was a foreign bullock, which had been bought in Wakefield Market by a Leeds butcher along with some others ; I think there were four of them.

3051. Was that also three weeks before ?—No ; it was bought in Wakefield Market on the Wednesday, and it was kept in a field in the borough of Leeds, at Osmondthorpe, for eight days. It was then brought into a slaughter-house to be slaughtered, and I detected it as having the Cattle Plague. I think that that perhaps was the most acute case which we have had. It was a foreign animal.

3052. (*Mr. Ceely.*) Where had that animal been purchased ?—It was purchased in Wakefield on one Wednesday, and it was discovered by me in a slaughter-house in Leeds on the Wednesday following ; that is eight days. It was turned out in a pasture.

3053. When purchased it appeared to be sound ?—Quite sound. It was a good Spanish bullock, and worth a good deal of money.

3054. How long did it live ?—I thought that it would not have lived the night out. I called our veterinary inspectors to see it the next morning and we were very desirous that the disease should take its course, but the owner would have it killed, as he said, out of its misery.

3055. It was killed ; it did not die ?—Just so.

3056. In what state was the carcase ?—In that case the animal was not bled ; it was only knocked on the head.

3057. The flesh looked very dark ?—It of course had the blood in it.

3058. But you have no doubt about that being the disease ?—There is no doubt about it.

3059. What was done with that animal ?—It was buried. I may state that the mayor of Leeds has agreed with a person to fetch and bury, according to the direction of the Orders in Council, every diseased animal which may die or have been slaughtered on account of this disease ; they are all taken to one place ; they are buried, and covered with quicklime, and covered with five feet of earth.

3060. It is known that they are buried properly ?—There is a man appointed on purpose to go and see the animal buried. I may state with regard to this Cattle Plague, that I have seen many thousands of diseased animals. Perhaps you may be astonished to know that in the course of my duties as meat inspector I have examined 1414 carcases which were brought into the borough of Leeds known or supposed to be in a diseased state.

3061. (*Mr. Read.*) In how many years ?—For one year. That is during the year 1864. That requires an explanation. After I was appointed inspector, the authorities of the borough of Leeds were very anxious to deal with the question of diseased meat. For about two years diseased animals were liable to be seized if they were brought into the borough of Leeds by any person, and were not fit for human food, the matter being brought before the Sanitary Committee of the Town Council. After very long and serious consideration of the subject, and after conferring with a number of the principal butchers, it was thought desirable to allow farmers and butchers, and owners of stock, to bring into any of the slaughter-houses of the borough of Leeds any animal which was known or supposed to be in a diseased state. A byelaw was introduced into the slaughter-house byelaws, wherein it is stated that every owner or person bringing into any slaughter-house of the borough of Leeds any animal known or supposed to be diseased shall forthwith give information thereof to the officer of the Council, that is to me, as meat inspector. It is then my duty to examine that carcase as to its fitness or unfitness for human food, and I may state that in 1863 I condemned 598 carcases of diseased animals as unfit for human food, and in 1864 I condemned 547 of such diseased carcases.

3062. Sheep or bullocks ?—Beasts, calves, sheep, and pigs.

3063. (*Mr. Ceely.*) In any of those cases was there anything approaching to the disease of which we are now speaking ?—I never saw a disease in my life at all like the disease known as Cattle Plague. I think that any practical experienced person, a butcher, for instance, if he sees one such animal in a very diseased state, will never forget it as long as he lives. He cannot make a mistake, if he is honest, with regard to Rinderpest.

3064. (*Mr. Read.*) Do you mean when the bullock is alive, or when he is dead ?—Both.

3065. Whether a man saw the carcase or saw the live animal he would never mistake it ?—If the mouth is examined there can be no mistake.

3066. (*Chairman.*) Supposing that you were walking down the market, would you be able to detect, at a butcher's stall, meat which was diseased with the Rinderpest ?—It would entirely depend upon the stage of disease in which it had been slaughtered. I may state that in the second case of Cattle Plague which we had, the animal had been under examination for two days. It was brought out of the Thorpe Hall pasture on the Friday morning by the owner, and our veterinary inspectors had it set apart in a stall belonging to the owner. It was slaughtered on Saturday evening. Although the animal showed unmistakeable signs of Cattle Plague alive, such as running at the eyes and running at the nose, when it was slaughtered there was positively no sign of disease whatever on the carcase as it hung up in the slaughter-house. I was perfectly astonished at it, and I frankly stated to our veterinary surgeons that had I had that case I should most undoubtedly have passed that carcase as a sound carcase of beef, and fit for human food.

3067. (*Mr. Read.*) Did you pass it ?—No ; it was condemned.

3068. Why ?—The veterinary inspectors came down on the Sunday morning to make a post mortem examination of this animal. Of course professional men have their own way of examining beasts, and butchers have theirs. As a butcher I looked at the carcase of beef. I then looked at the heart, the kidneys, the lungs, and the liver ; they all appeared to be perfectly sound and healthy. Of course the veterinary inspectors went through the entire intestinal canal and the stomachs, and they found in their investigation that this was decidedly diseased ; they showed that the fourth stomach was very much ulcerated.

3069. And therefore they condemned the meat ?—Yes.

3070. But in your opinion the four quarters of meat were perfectly good and fit for human food ?—I would not say so.

3071. But you would have passed it ?—I should have passed it. I was under the impression that we had been mistaken, and that it really was not the disease of Rinderpest.

3072. (*Mr. Ceely.*) Then you consider that at a certain stage you would not be able to detect any alteration of the meat ?—If the animal was killed at a very early stage, I should not be able to detect any alteration in the carcase. There is only one thing; the blood of the animal sticks peculiarly to your hand, showing that it is a blood disease.

3073. And it is dark coloured ?—Yes.

3074. Do you mean to say that when the animal is alive, or after death, you would detect a difference in the mouth under the Rinderpest and in the mouth of an animal under the foot and mouth disease ?—Yes.

3075. That is to say, living ?—Yes, certainly living. We have had a number of Scotch bullocks in two places in the borough of Leeds, and our attention was

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called to them. There were 13 in one lot, and two in another, and when the mouths of those animals were opened I at once recognized it as foot and mouth disease. I say that because it is so peculiar; the tongue is blistered; on the top of the tongue there are large blisters; it is not so with Rinderpest. We have blisters upon the tongue in foot and mouth disease, but in Rinderpest we have all the top of the mouth affected with red. I do not know that I should be right in calling it ulceration of the mouth; all the lining of the lips and right away down to the trachea, to the throttle, it is affected with red patches, and upon those patches there is a kind of white scurfy matter.

3076. (*Mr. Read.*) You send a good many lambs dead to London?—We do.

3077. Which is the most perishable and the most delicate meat, lamb or beef?—Lamb.

3078. Leeds is a large fat-stock market?—It is.

3079. Is it larger than Wakefield?—They are about equally divided.

3080. How many cattle and sheep have you on an average upon a market day?—We average about 600 head of fat cattle, and from 3,000 to 4,000 sheep and lambs.

3081. How far is Leeds from Wakefield?—Nine miles by the road.

3082. You say that in certain seasons of the year the splenic apoplexy is prevalent on the meadows near Leeds?—Yes.

3083. At what time of the year would that be?—Generally at the back end of the year.

3084. Not in June or July?—No; generally in October.

3085. You are of opinion that there is plenty of water for the stock to drink on those meadows without drinking the filthy sewage in the river?—I think there is, and that the cattle will not drink the other. I will not speak positively upon that point.

3086. It is your opinion that the Dutch cattle imported the disease into that district, and that it did not break out in those meadows spontaneously?—I think not.

3087. (*Chairman.*) Is the market-place at Leeds properly disinfected?—It has not been disinfected at all.

3088. Is there a great deal of Rinderpest prevalent in Yorkshire?—No, not so much. I may state that this outbreak that we had at Moor Town in the borough of Leeds is of a very aggravated character.

3089. Is there anything to which you wish particularly to call the attention of the Commissioners?—I was going to mention, as there are a variety of opinions entertained as to the desirability of curing animals affected by this disease, that I can relate a fact,—a fact that will always present itself, I think, to the minds of all owners of cattle. Last Saturday, along with Mr. Dray, a veterinary inspector, I went to visit some animals belonging to a person of the name of Marston at Moor Town; he had 11 dairy cows in good and fair condition, that were worth about 17*l.* a piece. On Sunday morning we went again, and one of them was dead; it had died early that morning, and the other was nearly dead; it was destroyed, and taken away and buried. I ought before to have said Saturday. On Sunday morning we went again, and we found that there were nine cows, and we found another one diseased, which we set apart from the rest of the animals. The man was very anxious to dispose of his other stock. He said it was all the property he had in the world, and he went down to Leeds to fetch up a butcher, and the butcher bid him 100*l.* for the remaining eight beasts. He asked leave to have them slaughtered on the premises, and if they were found to be free from disease the butcher would pay for them; and of course leave was given him. I think that such facts as these will always have their effect in preventing any curative measures being adopted with regard to any animals, whether they be dairy cows or whether they be fat stock.

3090. Are you in favour of trying curative measures or not?—I think that the farmers would not consider it their interest to do so. I think that they will look upon it as a question of pounds, shillings, and pence.

3091. (*Mr. Lowe.*) It is not a pounds, shillings, and pence question?—I think it is.

3092. (*Chairman.*) You do not think that you can rely upon any proposed method of cure with the view of eradicating the disease out of England?—Of course I am not a member of the veterinary profession, and I cannot say.

The witness withdrew.

PROFESSOR DICK and Mr. JOHN SWAN examined.

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3093. (*Chairman.*) (*To Professor Dick.*) I believe you are principal of the Veterinary College in Edinburgh?—Yes.

3094. (*To Mr. Swan.*) Will you state what your position in life is?—I am a partner in the firm of Swan and Sons, Live Stock Agents in Edinburgh and Glasgow.

3095. (*To Professor Dick.*) Have you studied the spread of the Rinderpest in Great Britain and especially in Edinburgh?—Yes.

3096. Will you state how you believe the disease arose in Edinburgh?—At first it seemed to arise in consequence of a herd of cattle being brought down from London.

3097. Will you be so good as to state the particulars of that case?—The two cases that I first saw belonged to a cow feeder of the name of Ogg. These animals he had bought from a man of the name of Shaw, a dealer, out of the drove of cattle that were brought down from London; several other cow feeders bought cattle out of the same drove; and the disease broke out almost simultaneously, or within a few days after those which occurred in Ogg's byres. I understood that there was one Scott that had it the day before, but I did not see that one, so that the first I saw was Ogg's.

3098. What was the date of that occurrence?—I think it was about the 8th of August. I have not a jotting of the date, but they were brought down in July; and I think it was about the 8th of August when they began to show appearances of the disease. The disease spread through this person's byres, and all the other cows died; but those two that came from London, the foreign beasts, recovered. The disease extended to other byres in the same lane, a narrow lane, on the one side in particular. On the other side there was a Mrs. Spence, who had a byre with a number of cows in it; and for several weeks those cows were unaffected, although they were within a little more than about the length of this room, or a little more off, with open windows; still it did not proceed to attack them for a considerable time.

3099. Has the disease spread with rapidity in Scotland?—It has spread in some parts from byre to byre with considerable rapidity. There were particular spots where it seemed to rage with more violence than in other parts; for instance, one is a place called Silver Mills near Stockbridge, and there are a number of byres there. Most of the cattle have died; but there has been one or two recoveries; and in one byre only a short distance from that place, there were four recoveries out of six. The disease also extended in the direction of the mill lead, which is very noxious and fœtid, and runs close by all those byres. At Canonmills there were two or three byres affected in the same way; and a little further on there were three byres which were also affected.

3100. Is it your opinion that the disease was communicated from London?—Yes. There is no other appa-

rent cause for it. No doubt the weather was favourable for the propagation of the disease, and the obnoxious vapours arising from this burn. I think that in all the places in Edinburgh where the disease occurred it was generally in situations that were rather naturally unhealthy. There is another place very similar to Silver Mills, and the mill-lead, at a place called Roseburn, about a mile and a half out of Edinburgh, where a foul burn passes along the front of a number of new houses that were built there for cow-feeders, and nearly every byre has been affected on that line. There is a great stench from this burn, into which the drainage of the town, the slaughter-houses, and so on, is carried, so that the air there is rather unhealthy; the byres are not much raised above the level of the burn, and consequently they are much exposed.

3101. In those byres the disorder did not break out in consequence of direct contact with the diseased animals, but from the effluvia that arose from those drains?—So far as I know there was none in particular; but the interchange was such that it was difficult to say whether there had been any cows brought into those byres or not. I believe that some of them had been cows brought from London, for it went on from byre to byre, until the whole line of byres was nearly swept. The returns that were sent up will show the numbers and the proximity of the different byres to one another.

3102. But the matter from the cows that were diseased and slaughtered in the slaughter-houses, or from the byres in which they had been kept, might have been in those drains, and thus have communicated the disease?—Yes.

3103. Will you state what steps were taken at Edinburgh when the disease first showed itself?—The best plan, I think, is at once to separate the sound from the unsound, and to take them to a different locality.

3104. My question was What measures were taken by the provost and authorities of Edinburgh with a view to stop the disease?—The only measures that have been taken are the formation of the sanitarium, so that the diseased animals could be removed to it; and strict regulations have been laid down in order to prevent animals being taken through the streets from one place to another, and to avoid bringing them into contact with the healthy animals.

3105. Is Edinburgh subject to the same Orders in Council which are applied to England?—Yes. A good many of the healthy animals when they were seized were generally removed, if it was at all possible, or the diseased ones were removed into separate byres, and when it could be done we were in the habit of treating those that were kept on, and which at all gave any prospect of recovery.

3106. Were inspectors appointed as they are in London and in the country?—Yes.

3107. Did they work efficiently?—I was appointed one of the inspectors, and three of my assistants also; there were besides two of the meat inspectors of the markets that were appointed, so as to assist, and to report to me when any case occurred, when I either went myself or sent one of my assistants to see it.

3108. Were you able to put a stop to the nuisances you have spoken of arising from those bad drains and places where there were stenches?—There is at present an extensive and expensive work going on in order to drain the water away; they are carrying it down to the sea, at a very considerable expense, but it will not be done for a considerable time, and that is the only way in which it can be done.

3109. Were these byres shut up?—A great many of them are empty; the animals have been killed out, or have died out.

3110. Have the markets and fairs been stopped at Edinburgh?—They have a market every Wednesday.

3111. You are probably aware that under the recent Order in Council the provost of Edinburgh has power to stop for a certain time the holding of all fairs and markets in the town; has that been done?—Mr. Swan will be better able to speak to that.

(*Mr. Swan.*) So far as the markets for store cattle are concerned, I believe they have been stopped; Dalkeith has been stopped, and East Linton, and also Hallow fair.

3112. Has it been confined to markets for lean cattle?—Yes; to lean cattle alone.

3113. (*To Professor Dick.*) You are one of the gentlemen who were appointed in Edinburgh to report to the lord provost and the magistrates on the Cattle Plague?—Yes.

3114. You made some recommendations, I believe, with a view to stopping the disorder; will you be good enough to state what they were?—The great object was to establish a sanitarium, so that the animals could be placad there, and be separated from the others as soon as possible, and put under treatment, or, where a separate place could be got from them, to have them placed separately from the other cattle.

3115. Do you consider that sufficient to stop the disease?—I consider that if they were at a sufficient distance, or at a reasonable distance, it would be; but I may mention a curious circumstance which occurred in the neighbourhood of the sanitarium to which the cattle are all taken, past a small paddock. A cow has been going in that paddock for the last two months, and has continued in perfect health, while the byre with 13 cows on the other side of the road, close by the road side, has also escaped. It would appear that it does not extend a very great distance from the animals that are affected going along the road, from those two cases, which are very well marked.

3116. Do you consider that the establishment of sanitaria in different parts of the country would be sufficient to get rid of the disorder in the country?—Yes, I think so. I may mention that we were not successful as to the treatment in the sanitarium, but it was useful in enabling us to get the diseased cattle away from the sound ones. We could not obtain accommodation enough to enable us to send the sound ones all away to separate places, which I should have preferred, because the air would have been changed, and they would have been got away from the foul effluvia which I mentioned as arising in the neighbourhood of the various byres where the disease prevailed to such an extent.

3117. In the 9th section of paper No. 14. of the report, which I hold in my hand, I find this passage: "If these views be correct, then it is obvious that "not only is the isolation of the healthy from infected "cattle imperatively demanded, but that there is "great risk, under present circumstances, in bringing "together droves of cattle, as at fairs and markets, "seeing that amongst them may be included infected "animals capable of communicating infection, even "though they may exhibit no outward symptoms of "the disease detectable by the most experienced "veterinarians."—Yes; there is no doubt that for a certain time they are not quite safe, and it would be well to have the markets dispensed with as far as possible. In the meantime I may mention that we are testing the infectiousness of the disease in sheep.

3118. Do you believe that there is considerable danger, when large droves of cattle are congregated together in fairs, of spreading the disorder through the country?—Yes.

3119. The 10th section goes on to say, "It would "appear to the committee to be a legitimate practical "induction from these premises that fairs and markets "for the sale of lean or store cattle should be for the "present suspended. The greatest caution should "also be exercised in regard to the traffic in fat "cattle. If markets for fat cattle could be avoided, "and some other arrangement could be made by "which the butchers could supply themselves, that "course would be highly desirable; but if such "markets be unavoidable, then it would be desirable, "as suggested by Mr. Swan, the eminent cattle sales-"man, that they should be held more frequently than

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" at present; say, twice a week instead of once a " week, so that lots of cattle purchased by the " butchers might be at once slaughtered without any " delay, instead of its being necessary to keep some " of them for several days before being slaughtered, " at some risk of spreading the infection." What is your view with regard to fat cattle?—The plan that I generally adopted where fat cattle had any chance of coming into contact with diseased cattle was to recommend that they should be slaughtered as soon as they could be disposed of, and if they were in perfect health that the cattle should not be taken to the market, but that a butcher should be requested to come to the byres, and look at them, and buy them privately from the cowfeeders.

3120. On the farm of the feeder?—Yes; so that there could be no danger of their being travelled, and coming in contact with bad ones, but be taken away to be slaughtered by the butcher.

3121. There is danger, is there not, if an animal is sent to the market for slaughter, of its being sent back again infected to graze in other districts?—Yes.

3122. Do you think it is practicable for the cattle to be slaughtered on the farms where they are reared, and be sent to market as dead meat only?—If they could be slaughtered on the place where they were reared, and sent to market, no harm would arise from that; none whatever.

3123. (*To Mr. Swan.*) Will you be good enough first of all to express your opinion as to stopping the lean cattle markets?—At the very first, when the disease came to this country, we were getting a good deal of stock from Holland, and it came out that there was a certain number of Dutch cattle that were got in London, and sent down to a farm in Tweedside; they were bought on a Monday out of the stance where dairy cows had been standing. I have made an investigation into the matter from the commencement, and yesterday the man who sent them down showed me where he had bought them in the Metropolitan Market. These 14 cattle were sent down on a Monday to Berwick amongst some Dutch heifers. They lay in a field at Berwick several days among some short-horned bullocks, and on the 18th of July the Dutch cattle were offered for sale at St. Boswell's fair. They were unsold, and were sent to Kelso, and on the Friday following they were sold to Mr. Henderson at Shedlaw; and Mr. Oliver of the Spread Eagle Inn got part of the heifers. The heifers were all quite sound up to this time; but immediately after, that is the day following, the bullocks were attacked by the disease, and they were nearly all killed out. That showed that the disease had come there, and it was the first that had come; immediately after that it appeared in Edinburgh. I was told in Edinburgh market that there were so many cows, 12, had died; I left the market immediately, and went over to Professor Dick, and I found him and Professor Strangeways, and I said to them, " If there are 12 " cows dead in Edinburgh I shall go to London " to-night, to see the Home Secretary upon the " matter." I accompanied Professors Dick and Strangeways to Silver Mills to some byres there, and we saw two cows affected; the first that the professor had seen, but he did not give his opinion. From there we went to Ogg's byre, and found a Dutch cow there which had then all the symptoms that Professor Simonds gave out as the indications of the disease along the back, and looking the same as if it was blown out with wind. Professor Dick then, I believe, came to the conclusion that it was Rinderpest. We called a meeting immediately on that day at the Corn Exchange, and since that time we have formed an association, and have a meeting every Wednesday. We have these meetings with a view of trying to suppress this disease. I have attended at every meeting, and I have endeavoured to point out the necessity of allaying the public alarm. Sir William Bruce, the convener of the Falkirk Tryst Committee, instructed his agent, Mr. Strong, to ask me to come out to speak with him, and when I came out I told him that we would take no cattle there without having certificates that they had come from the breeders. There were five or six score of diseased cattle had been shown in Edinburgh, and wherever they went they were likely to spread the disease; if they got into a market they would do so; if those cattle got into Falkirk market they would carry the disease. Eighteen of them got in, and we found out shortly after that the disease broke out in Forfarshire. A man of the name of Fawns had bought upwards of 190, and among those were those 18 beasts that had been shown in Edinburgh market.

3124. At that time, I believe, you advocated a suppression of fairs and markets?—Yes. When it was intimated that this disease came from Holland, our firm wrote to say that we would not on any account receive cattle from that country. We wrote to Mr. Baring, stating to him what we had done, and also saying that we should be glad to come to London to give our opinion as to the best method of preventing the spread of the disease, and in order to put a stop at once to all public alarm. I was not altogether satisfied with the inspection that was carried on in Scotland, nor am I just now. We have found out that the veterinary surgeons throughout Scotland know little about the disease. Going from place to place, we are afraid that they are carrying this very noxious infection with them; and I recommended the Home Secretary to appoint the sheriff or the convener of the county, or both of them, to call a meeting of the leading stockholders of the county, who should report each day as to the health of the cattle in their respective districts. By doing that I think, myself, that the disease would be far better kept down than by veterinary surgeons who have nothing to prescribe; and without we can get a prescription there is nothing to be done. If this was done I think good would result from it. Let them receive their advice from Professor Dick, in Scotland, and from Professor Simonds, in England, and let the farmers associated have the whole power over the stock; and I am sure there would be great interest taken, and every effort made to get the disease kept under; but the system now is, that a poor man has his stock slaughtered without appeal.

3125. You have stated your views as to the markets for lean and store cattle. What do you say as to the markets for fat cattle? Do you believe that they also tend to spread the disease?—I am afraid that it would be neither practicable nor workable to stop the fat cattle markets. I suggested six weeks ago in Edinburgh and Glasgow, that they should order a brand to be put upon every beast in the fat stock market, in order to show that it had been there; and I recommended them on no account to let any beast go into the fields for fear it should come in contact with the grazing stock. I may say that in Edinburgh the substitution of a slaughter market for a live fat cattle market is unworkable.

3126. Do you believe that fat cattle markets tend to spread the disease?—Yes; if they went into a field, and came into contact with animals grazing; distinctly so.

3127. You have stated your reasons why you think that the fat stock markets could not be abolished?—Yes. Just now there are cattle coming from Denmark. There are, perhaps, from 200 to 300 fat cattle in a week coming from Denmark to Scotland, and I think that there are very likely between 2,000 and 3,000 fat sheep, and it is impossible that those sheep or cattle could be slaughtered on landing. I am afraid, so far as the fat cattle markets are concerned, that they could not well be suspended in large towns where the stock is consumed, but where, in the north of Scotland, there are what are called weekly or monthly fat markets, I think those might be all stopped.

3128. The Commissioners have been informed that a considerable quantity of meat comes up from Scotland to the London market; is that the case?—Yes.

3129. And that the animals are killed on the farms

where they are reared?—No; that is not so; they are killed in Aberdeen and in Glasgow or Edinburgh, or at the large slaughter markets, or they may be killed, perhaps, at Dundee, which is another large place. The other thing is impossible, because there is not accommodation for killing them at any of those farm places. I have mentioned this at every meeting I have attended. I do not believe that the veterinary surgeons sustain the view which I take as to the spread of this disease.

3130. Do you not believe that cattle that are sent to market for slaughter are very often driven away, and that they afterwards graze in pastures or fields?—Yes; and I think that that should be stopped.

3131. You think that is practicable to stop this?—Yes, perfectly so, in these times. It may be an inconvenience or hardship to some parties, but I think that any man having any regard for the country would not complain. I believe it is quite easy to stop it.

3132. How would you propose to work a system of slaughtering the animals, and not allowing them to leave the town where they are sold alive?—At Glasgow I have recommended that they should have a market there on Thursday and Monday. I was sent for by the provost of Edinburgh, and Professor Dick was present, and they asked me for my opinion, and I said that I thought it might do very well, if, instead of a butcher buying his weekly stock on Wednesday, that in Edinburgh he should purchase them on Monday and Wednesday, and in Glasgow on Monday and Thursday. The animals could be sent to a slaughter-house, and they might be fasted for one or two days before they were killed.

3133. How would you know that an animal was not driven out of the town when it was taken from the market place, even although a mark was made on its tail?—I proposed to the lord provost of Edinburgh and the magistrates to put a brand on them, and I would propose to do the same thing with the cattle in every fat market in Scotland. I would prohibit them from going out to grazing fields, and an Order in Council might be issued saying that they should not be allowed to go out.

3134. Would it not be necessary to put a stop to all private slaughter-houses, and that the whole matter should be put under the supervision of the lord provost?—We have it so in Edinburgh just now; no beast is allowed to be slaughtered, I think, within a mile of the city.

3135. Are there not private slaughter-houses within the city?—No.

3136. What view do you entertain with regard to the disease?—I have observed very often that in every district, if a man's stock is affected, they take away the diseased animal; but I am sure that any professional man knows, that if a fever or cholera breaks out, those who are unaffected are removed; or, take the case of soldiers abroad, if cholera breaks out among soldiers, or any other fatal disease attacks them, they remove the whole of the troops to a different station. Now, as I have argued, let a diseased bullock be taken care of; and with regard to the clean cattle, treat those cattle the same as if they were all diseased. So far as I have seen of this disease, the third stomach of the animal, after the disease gets to a certain length, is as hard as a stone, and no medicine, when the disease reaches that stage, if of any avail; but if the cattle are taken care of in time, and get some of what is prescribed by Professor Dick, I believe they could be cured; but that is a matter which I think has been overlooked altogether, although I have brought many of our large stockholders to do it. I hold this opinion, that if men in these times do not put themselves about a little they will lose all their stock. Another thing is, with regard to the disease in sheep. Immediately after the report that Professor Simonds made to the Privy Council, I was much struck; and with a deputation I went to the lord provost, and had an interview with him. I then went to my own farm, and I took out two four-year old wethers from Sutherlandshire out of a flock of 700. I took out two from Orkney; I took out two young Swedish sheep; two half-breed Denmark sheep; and I took out two cross-bred lambs from Roxburghshire, making ten in all. I went to the Town Council, where there was a full meeting, and I asked to have an interview with the lord provost and the magistrates. I saw them, and I told them that I would give them those animals for the purpose of making an experiment, and it was arranged by Professor Dick that the sheep were to go down there. I put men in charge of them night and day in the sanatorium, and they were put in, I think, 14 hours out of the 24; they went in at six o'clock, and came out at eight, and I believe this is the 16th or 17th day, and they are as well to-day as when they went in. My reason for doing this was, that the whole of the sheep farmers in Scotland were in a state of panic; and I knew the nature of sheep, and I intended to go into the county of Norfolk, to see the lambs that were reported upon there; but I have not been able to get away on account of being too busy. My own opinion is, that those lambs must have been changed from one place to another, and that they must have been hungered, and afterwards put upon marshy grass or tath where cattle had previously been grazing. I do not believe that sheep will be seized with the same disease as that which is called Rinderpest. My reason for doing this was also that we had sold a deal of sheep stock to go to Ireland, and also to Germany, and I wished to try, if possible, to relieve the sheep farmers from the anxiety which they felt.

3137. Do you believe that sheep can communicate the disease to bullocks or cows?—I cannot give an opinion upon that point; but that has to be tried. I have received orders to send five clean bullocks in, and these 10 sheep are to be put in contact with them; but I am afraid it will not stand good, for this disease is very fatal; none is so fatal as it; and I am satisfied that the infection will be communicated in the wool.

3138. With regard to the cattle trade of Scotland, there are, I suppose, large breeding districts in Scotland, where all the Scotch animals that are in England come from?—Yes.

3139. Is the season past when the animals leave these districts to be sold in different parts of Great Britain? At the last Falkirk Fair I pressed upon a man to slaughter some cattle, for he was actually going to take them back into the middle of Argylshire; a Mr. Macdonald; and I said to Mr. Phillips that they should send off immediately to the Duke of Argyle to get them stopped, and that they had better shoot them. The man said that nobody would buy his beasts, and what could he do.

3140. Is the season past for those animals to be sold?—No. The Doon Fair is a very large fair, and it will be a matter of great consideration here, and in the south of England, and in Cumberland, and in Dumfries-shire; all these stockholders are graziers, and their grass will be finished, and we do not know what is to be done with the cattle.

3141. What will be the effect of stopping the store fairs on the breeders of those cattle?—What we have done, or advised to be done, is this, that wherever there is a clean herd of cattle the parties are to let us know, and then we shall try to arrange with the parties in want of the stock. Before I came away there was a man that grazed a large herd there, and I sent my son into Dumfriesshire, and he sold 100 of those beasts. In such a year as this I do not think that the animals can be allowed to congregate together; there must be proper care taken, and I think that if the farmers in every county were put into divisions, they could manage much better, and not to call in the veterinary surgeons, to give the veterinary surgeons the power, and the farmers to have nothing to do with it.

3142. Does the trade in store cattle continue later than this month?—Yes; until about the middle of

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November. Hallow fair is held about the 10th or the 11th, and that will be the last fair but one that we have in Scotland for the year.

3143. (*Mr. Lowe.*) (*To Professor Dick.*) Do you see your way to the end of this disease, or do you see any chance of getting rid of it?—I do think that in a little time it will disappear.

3144. What is it that you rely upon?—Upon a change in the weather. I have an assistant who is a native of St. Petersburg, and he informs me that in St. Petersburg, when the cold weather sets in, the disease subsides.

3145. Evidence has been given here quite to the contrary; and suppose that that hope fails us, what else have you to rely upon?—To endeavour to treat it. I think that with a little further experience we shall be able to treat the disease more successfully than we have hitherto done.

3146. But suppose we do not succeed, and do no better than the Austrians and Russians have done, can you point out anything else that might be attempted?—My plan of treatment is this: On examining the pathological condition of the animal, I find, first, that the first and third stomachs are overloaded with food, and I commence therefore by the administration of mild purgatives, followed by stimulants, and after that, tonics. I have done this with a tolerable degree of success; and in cases where the disease has been a little more advanced, and where purging has set in, I have commenced by giving a dose of oil, and then following that up by lime water and tincture of opium.

3147. You cannot announce to the Commission that you have discovered any method of treatment that is satisfactory to yourself?—Not thoroughly so, but I think it approaches to it.

3148. Supposing your mode of treatment does not turn out well, can you point out any other hope that we have?—I do not see any other method, excepting that which I have indicated, and which seems, from various cases, likely to succeed; for instance, there is one man at Hamilton Place who had six animals taken ill, four of them have recovered, and he seems so sanguine about the recovery that he is about to buy in fresh stock.

3149. Can you state what per-centage you have cured?—The per-centage has been very small; not above 10 or 15 per cent.

3150. Passing by the treatment, and supposing you do not succeed in discovering a remedy, can you point out any other means by which the disease can be overcome?—I think I would have some hope that in placing them by themselves, and keeping them separate from all other stock, and leaving them to themselves, a good many might recover.

3151. Those that were visibly attacked?—Yes.

3152. What would you do with animals which had the disease in a state of incubation; might not they communicate it to others?—If they were in a state of incubation I would adopt means to purge them, and put them through a course of treatment in the way I have mentioned, as a means of throwing off the disease.

3153. (*Dr. Playfair.*) Has there not been a medical committee of the most eminent medical men appointed in Edinburgh to assist you in the investigation of this disease?—Yes.

3154. Have they directed their attention to the sanatorium at all?—They have not visited it yet.

3155. In spite of all the assistance which you have had from your college in regard to the sanatorium, you have not been very successful in the cure of the disease?—No; but that has in a great measure arisen from none but advanced cases being sent in.

3156. In the whole of Edinburgh you say that the success has not been more than 10 or 12 per cent. altogether?—Thereabouts.

3157. (*To Mr. Swan.*) Although you would put down lean cattle markets, would you allow the movement of cattle between farm and farm?—What I mean to say is, since the cattle are all stopped, that East Lothian farmers may require many hundreds, and they want them just now; and if the sheriff or the convener of the county, or both, were to call the principal stockholders together in each county, let the farmers, or the sheriff, instead of putting full powers into the hands of inspectors, without knowledge, let the sheriff or convener, or both, and a certain number of farmers, see that the cattle are healthy.

3158. Do you mean to give a clean bill of health?—Yes; and to let no man remove his cattle without the leave of the sheriff, and let no cattle go into any county without they were clean.

3159. You would allow the fat cattle to be sold and slaughtered in the market?—Yes.

3160. Would you allow the clean cattle to pass over the same roads that the diseased fat cattle had passed over?—Not likely. I think that no clean beasts should be allowed to travel where any diseased beasts had been near.

3161. But how could you prevent that?—It would be well known. It would be known throughout the country wherever the cattle were diseased.

3162. If you allowed live markets for fat beasts to be slaughtered there, and permitted the movement of lean cattle from one farm to another, how would you prevent the lean cattle passing over the same roads that the fat cattle had passed over?—Most of the lean cattle districts are not localities where cattle are fed.

3163. Taking the case of the Lothians, would you allow any movement of cattle on the roads in the Lothians?—Not if there was any disease there; distinctly not.

3164. You would not allow it if there was any disease at all in the Lothians?—Not that they should come near where there was any disease.

3165. Do you think you could keep the fat cattle quite away from the roads over which the lean cattle travel?—Yes; I am sure of it, if you gave the farmers the power. I hold that every farmer who has stock is as anxious about this matter, and more so, than other people; but to take the power out of their hands, and to put it in the hands of an inspector, who has merely got power from the Privy Council, and is not a judge, I do not think would be the best thing.

3166. Do the farmers possess any more knowledge of the symptoms of Rinderpest than the veterinary surgeons do?—No; but it is a disease which I think the veterinary surgeons do not understand, and that has been found out. We are looking to them, and to medical science, to furnish us with a prescription.

3167. Why do you think that the farmers would have more skill than veterinary surgeons in the case of an unknown disease?—They know when there is no disease, and they are very anxious to keep it down, and they think, in the way of appointing veterinary surgeons, that the Government should pay for this; but every time that I hear this, I think it will be the greatest affliction that ever they can meet with if they allow the Government to take possession of all the stock in England.

3168. You would throw it upon the localities entirely, and not upon the Imperial Government?—Yes; I think that the stockholders should protect themselves.

3169. Do you think they can do so?—I think they can do it in a great measure.

3170. If they are in the least degree negligent, and leave one infected cow in a district, will not that cow become the centre of infection?—Yes; but I think they have more power, and are better able to do what is necessary, than if you gave power to a man who did not know, and who had had no practical experience. Let the farmers have a few assistants; let them call in assistants; and let them apply for medicine to Professor Dick or to the head college in Edinburgh, and let them do the same in England; let them apply to Professor Simonds, or to the Veterinary College in London.

3171. Do you believe that the farmers are more skilled and able to manage these matters than

veterinary surgeons are?—I do in this particular disease.

(*Professor Dick.*) I may mention that a great number of veterinary surgeons have come from different parts of Scotland to Edinburgh to see the cases, and I have invariably given them an opportunity of seeing them.

3172. (*Mr. Wormald.*) (*To Professor Dick.*) I think you stated that you would remove the sound cattle a reasonable distance from the diseased ones; will you state what you consider to be a reasonable distance, for it is rather a vague term?—It would depend upon circumstances, whether they could get them placed at a greater or a less distance; but I would say that if you could get them 100 yards from the others they would be quite safe, provided they were kept totally distinct.

3173. Would you adopt any medicinal measures with regard to those cattle which had come within the influence of diseased cattle, speaking now of sound cattle?—I think it would be very advisable in the case of sound cattle, where they had come from an infected district, to administer a dose or may be a couple of doses of purgative medicine, and also some alterative medicine afterwards.

3174. Why do you say it would be advisable to administer alterative medicine?—Because I find in all the cases of animals that are affected the paunch and the first and third stomachs are overloaded, and I would therefore say that by unloading the stomachs you restore them to a healthy condition, and digestion will then go on freely.

3175. Has it been observed as a premonitory symptom that the dung of the animals is in any way changed, either in consistency or in calibre?—It is changed in the first stages of the disease; there is a quantity of mucus on the dung, and there is sometimes a degree of constipation; one of the earliest symptoms is purging.

3176. Is the calibre or the circumference of the fæces less?—At first I will not say that there is much difference in regard to the quantity.

3177. I am speaking of the size or circumference of the fæces?—If there is a degree of constipation they are perhaps a little contracted.

3178. These are the earliest symptoms?—Yes.

3179. (*Mr. Ceely.*) I believe that flies are very apt to settle about the infected animals?—Yes; and I would remark that this summer flies have been more abundant in Scotland than I ever saw them in any season.

3180. Do you think it is possible that flies attaching themselves to the secretions about the nose and eyes might become vehicles of communication, and so inoculate other animals with the disease?—I have great doubts about that. It is quite possible that they might communicate the poison from one animal to another; but I have no certainty of anything of the kind.

3181. In such a case a distance of 100 yards would hardly be sufficient to protect the animals from such an influence?—No; but I think that might be obviated by simply having the kye or the oxen dressed with a mixture of train oil and naphtha; the flies would scarcely approach that; and I think that a very little of it placed on the head and along the back would completely prevent the flies from attacking them.

3182. In the post-mortem appearances of the animals I suppose there is a general character, but no uniformity?—There is a tolerable degree of uniformity. We always find a considerable injection of the mucous membrane, and the first and third stomachs are impacted; and in some instances we have found circular rings of apparent inflammatory action on the folds of the third. But Professor Spooner tells me that he has had some cases in which there have been large patches, and the have been ulcerated, and the edges have cicatrized, and healed up completely. We have not met with that in our dissections. The whole of the intestinal canal is also highly injected; and there is in the latter stages a kind of bloody discharge with the fæces.

3183. (*Mr. Read.*) Are not the cowhouses in Edinburgh a frightful source of generating disease among the cattle?—I think they really are. They are very unwholesome.

3184. Would you abolish them?—You cannot abolish them altogether; but it would be a great matter if they could be improved in some way, or they might be removed beyond the bounds of the town.

3185. Would you not remove them from the city?—I know that some of them are so low in the roof that you can scarcely walk into them.

3186. You have removed the slaughter-houses, but you keep the cowhouses in the city of Edinburgh?—The slaughter-houses are within the city, but the cowhouses I would remove. The slaughter-houses are under very good regulations, and are well taken care of.

3187. I thought you stated that the slaughter-houses were outside the city walls?—No; the private slaughter-houses are abolished.

3188. Do you know how many cows Mr. Shaw brought from the Metropolitan Market?—I do not remember.

(*Mr. Swan.*)—I think there were 17 the last time; he was there three weeks; but in the fatal lot I think there were 17.

3189. (*To Professor Dick.*) Did you not trace the disease in every one of those cows?—In most of them.

3190. When you say that you think there would be found some mode of successfully treating this disease, do you not ground that opinion rather upon your future hopes than upon your past experience?—It is from my past experience and knowledge of the pathology of the disease that I think it is within the reach of medicine, although it will always be so far fatal, depending upon the parts affected, and the severity of the attack; but seeing that the disease affects the stomachs, if we can see the case early, and can remove the source of irritation from the stomachs and bowels, I think there is great probability of recovery, and in some cases where they have been vigorously treated I have seen them recover pretty rapidly.

3191. In your actual experience I think you stated that you had not cured more than 10 or 15 per cent.?—Certainly not; but then the cow-feeders are such a set that you do not get information sufficiently early to have a chance of doing good, and in the sanitarium you can never get them until they have been two or three days ill, and the consequence is that we have but little success there.

3192. The measures you would resort to would be preventive rather than curative?—I would recommend preventive means more than curative, because, if you can prevent the disease, you will get more easily quit of it.

3193. (*To Mr. Swan.*) I think you stated that the outbreak in the neighbourhood of Berwick took place as early as the 18th of July?—It was in July, and the cattle that were taken out from there were shown at St. Boswell's Fair on the 18th of July, and they were sold at Kelso on the Friday following to Mr. Henderson.

3194. Was that outbreak distinct from the outbreak in the Edinburgh dairies?—Yes, this was.

3195. I understood you to say that these were imported cattle?—They came from London; they were bullocks that came from London.

3196. And they had nothing whatever to do with the Edinburgh dairies?—Not the cattle that came to Berwick. The man who bought them showed me the stance yesterday in the Metropolitan Market where he bought them. His name is William Cockshot.

3197. Do you think it would be impossible to stop the transit of all store cattle for the next six weeks?—I am afraid it would be ruinous to a great many; but it may be done, I think, with perfect safety.

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3198. Are you aware that in Norfolk we now require, or shall require in the next three months, some 30,000 head of lean stock to graze?—We send a good deal to Norfolk, and I know the requirements of the Norfolk people; but for such a distance as that I do not think it would be safe to send cattle, or from any distance from one country to another, where it is known that the disease is not existing.

3199. You say that you would abolish all store markets; would you include sheep?—Sheep could be sold well without going into the fat cattle market. I can scarcely give an opinion upon that until the experiment has been concluded in Edinburgh.

3200. If you abolished all store markets, it would be as well, would it not, to abolish the sheep markets?—I am quite satisfied of it; and if the Commissioners are that way disposed I should be perfectly willing to give my sanction to it, for I hold distinctly that we have plenty places in the neighbourhood of Edinburgh for the purpose, without bringing them into the fat cattle market.

3201. I suppose you are aware that sheep do convey the disease?—I am not sure of that; but I should think that the sheep I have spoken of may have it, and that it would be unsafe to be tried with the five cattle; I am almost sure that they will carry the disease to those clean cattle.

3202. You think that they will?—Yes.

3203. Although you think that sheep would not take the contagion, they might carry it in their coats?—Yes. In ordinary circumstances I do not think so; but in this case the sheep and the cattle have been lying for 16 days night and day together, and I think it will be carried.

3204. In this case you think they will carry it?—I think they will.

3205. I understood you, in answer to Dr. Playfair, to say, with regard to the transit of store cattle, that you would have certain infected districts, as it were, proclaimed, and that no store cattle should be allowed to pass through them?—Neither out nor in.

3206. By taking that step you think that the transit of store cattle might be continued?—I think so.

3207. Without running any great risk?—Yes.

3208. (*Chairman.*) (*To Professor Dick.*) Do you consider the Rinderpest a more serious outbreak in Great Britain than the pleuro-pneumonia or the foot and mouth disease?—I think that the pleuro-pneumonia has been more fatal as yet than the Rinderpest.

3209. That is with regard to the past; but with regard to the future, we have only just had an outbreak of the Rinderpest?—The pleuro-pneumonia depends a great deal upon the seasons, and would vary according to the seasons.

3210. That is hardly a direct answer to my question. Taking it in every way, in hot weather and in cold weather, and taking an equal time of duration in the country, which do you consider the most serious, the Rinderpest or pleuro-pneumonia?—The Rinderpest.

3211. (*Dr. Jones.*) How many post-mortem examinations may you have had of the rinderpest since August?—I have had at least a dozen, but I could not speak positively about that. I have had them very frequently without taking any note of them. I have only just examined them. We have had very frequent opportunities, but I cannot say positively how many. I think there would be at least twenty.

3212. (*Professor Spooner.*) I presume you act in the capacity of inspector in Edinburgh?—Yes.

3213. Speaking of prophylactic measures, and the difficulty of meeting with cases in the early stage of disease, in the event of disease breaking out in a large dairy, and showing itself in one or two cows, are you not empowered as an inspector to prescribe for the other cows?—Yes, and we do so.

3214. So that in that case you would have an opportunity of treating the disease by prophylactic measures?—I have done so in some cases, and I have found it to have been with good success, but we have no certain proof that we have succeeded in those cases. There was one case at Corstorphine where two cows were affected, and I think there were 20 others in the byre; these were ordered medicine; and they all got round; but in that case the others were separated from them, and they might have got round without any treatment, because I hold that sometimes they get round without any treatment.

3215. Have you had an opportunity of observing any difference between those cowsheds where prophylactic measures have been resorted to and those where no such measures have been adopted?—Yes, I have, although not to a great extent. You cannot depend upon what the cowkeepers say or do; they very often undertake to treat the animals themselves, notwithstanding the orders I may have given.

3216. Supposing your attention were directed, we will say, to two sheds, each containing 20 cows, and in one shed or in each of those sheds two of the cows had undoubtedly shown evidence of the disease, and suppose that in the one case you were to adopt the prophylactic measures which you have suggested to the Commission, and in the other case you were to leave it entirely to nature; what do you think would be the difference in the result?—I do not remember any case exactly parallel to the case supposed in the question. I have mentioned the case at Corstorphine, where there were two cows that had the disease among 20 which had medicine, but I do not remember another byre of the same size where you could get them to do that. In the case of one byre, I ordered medicine; but there was a chemist and druggist in Edinburgh who had held out that he had a remedy, and the owner of this byre, who had a good many cows, and who had wanted to treat them in that way, and he went and got this medicine from this druggist, and treated them himself, and they all died.

3217. Do you think that the mortality in the one case where they had submitted to your directions would be greater than in the other; that is to say, would the mortality be greater in the case where the cows were not submitted to treatment than in the case were the cows were submitted to treatment?—I should state that I have observed that cows will often get well of themselves; and it is quite possible that in a good byre, by attention to diet, cleanliness, and covering, they might recover without medicine, although I would always expect that the exhibition of moderate doses of laxative medicine would be attended with advantage.

3218. (*Chairman.*) Have you anything further to suggest to the Commissioners with regard to the disease and the remedies to be applied?—I do not think I have anything more in particular to say.

3219. (*To Mr. Swan.*) Have you anything particular to suggest as to remedies for the disease?—One thing I would suggest is, that the Royal Commission should order an analysis of this Rinderpest beef; we are so anxious about it; it is unknown what it is in its earliest stages, and if it gets amongst those fine fat cattle, worth 20*l.*, 30*l.*, or 35*l.* each, the public is anxious to know whether it is wholesome or unwholesome beef in the early stages. If it is unwholesome, the farmers would be quite satisfied that the meat should be destroyed. Of course coming from the Royal Commission, who would be sitting until such an analysis was made, it would come with very great authority. There may be valuable animals that perhaps would be destroyed, but it is very important that some information of that sort should come out.

3220. Is there anything else which you would suggest as to immediate remedies?—There is another thing that we should do. The sheriffs for every county in Scotland are entitled to have the prescribed medicine put in their power, and they ought to know how to treat cattle. At the present time they are at a loss to know what do do; and we are now looking to the veterinary or the medical profession to give us a prescription, to let us know how to treat the animals if the Rinderpest comes amongst the cattle.

The witnesses withdrew.

Mr. JAMES BURCHELL examined.

3221. (*Chairman.*) You have been a good deal in Russia; have you not?—I have.

3222. Are you well acquainted with Esthonia?—Yes; very well.

3223. Your attention, I believe, was drawn to the desirability of importing Russian cattle into this country?—Yes.

3224. And you communicated to Mr. Hönck and Mr. Baker upon that subject?—Yes.

3225. What was the result of your communication to them?—That I could get fat oxen and fat sheep there at a reasonable rate, and that I made a contract with the Esthonian Society for 800 fat oxen and 800 sheep.

3226. What followed?—Mr. Hönck and Mr. Baker agreed to give me a third share in the profits resulting from the sale of those sheep and oxen to be sold in London, and I went to Russia, and brought over a cargo of 321 oxen and 329 sheep.

3227. Where did you purchase those animals?—In Revel, at a meeting of the Esthonian Society.

3228. What passed upon the matter between you and the Esthonian Agricultural Society?—They agreed to give me 800 oxen for four copecs per pound of living weight, and there are three copecs to a penny, and 800 sheep.

3229. Without going into the detail of the contract, it resulted in your coming to an agreement with Mr. Hönck and Mr. Baker, and you returned, I believe, to Revel?—I did.

3230. What did you do then at Revel?—I went and looked through the oxen, to see how they were feeding them, and I showed them how to keep them, and so on. They are very ignorant and very careless, and so I went to show them how to keep them.

3231. Where did you go to communicate that information?—To several estates in several parts of Esthonia; in fact I have been over most of it.

3232. What was the number of cattle that you collected at Revel?—The society brought me 640 oxen into the yard to select my 400 from, but a great many of them were very lean and sick, and one thing and another wrong with them.

3233. Did those 640 come only from Esthonia, or did they come from other parts of Russia?—Some of them came from other parts near St. Petersburg.

3234. Will you state what number came from near St. Petersburg?—Forty-six.

3235. In what condition did you find those 46 animals that came from St. Petersburg?—They were very good.

3236. Were they healthy?—Yes, they were, with the exception of having received some damage in transmitting them by four-horse waggons to the yard.

3237. Will you be good enough to state from whence came the actual cargo that you put on board the "Tonning?"—They came from Revel from and near St. Petersburg, and I sold four in the yard, two for having the foot disease, and two for being sick. The society forced me to take all sorts of rubbish, which I protested against, and I went to the burgomaster, and got him to interfere, and he gave me two experts, or rather I should say three judges, to assist me against the society. The society stopped my passports, and brought me before the justices, and did everything they could to intimidate me to make me take the full number, in order that I should not fall back on them for short delivery.

3238. Of the actual cargo that you took to Hull how many animals came from St. Petersburg?—Thirteen.

3239. Did you make any inquiry at the time as to whether there was any disease among the cattle in Esthonia?—No; but a gentleman told me, and I knew, of one case where 30 beasts had been feeding for me, and one caught the disease and died, and the gentleman supplied the place by another for which he paid 40 roubles.

3240. What disease?—The complaint; but it does not affect them in that country the same as here.

3241. What complaint?—The regular Russian complaint; purging, and running from the nose.

3242. Was it the identical complaint that is now raging in England?—That I do not know; I could not say. I have not seen one beast affected in England by the plague, but I believe it to be the same. Several gentlemen spoke to me about their oxen dying.

3243. Did you see any cases of this illness when you were in Esthonia?—I did not, except two; one that came in the ship, and one that was bad in the yard.

3244. What were the symptoms that you saw?—They stood with the back up, and they had a running from the eyes and from the nose, and were scoured.

3245. Are the symptoms that you are describing those of the animals that died in the yard?—Of the one that I sold and the one that died in the yard at Revel; and they brought me before the justices to try to make me pay for it. I had not weighed it or received it, but they tried to insist upon my paying for it.

3246. Where was the animal that you saw sick with its back up?—In the yard amongst the others. In fact, I noticed some of them sick, but I did not make any remark. I only passed them away as well as I could, for it is not a very virulent complaint in that country. They never take them out of the house when they get sick; they leave them amongst the other cattle.

3247. What did you think at the time was the matter with the animal?—I thought that it was some serious complaint, so that it would not be suitable to take it to this country.

3248. Did you think it infectious?—I did not. I did not understand anything about it.

3249. Have you not had the curiosity to go and see any of the animals that are suffering under the disease now prevalent in England?—No, not one. I have not known where to go to see them.

3250. What reason had you to think that the disease was the Rinderpest?—From the description that I have heard of it since, from the running from the eyes and the nose, and the discharge, and the description that some of the gentlemen in that country had given me.

3251. Was this animal that fell sick one that came from Esthonia, or one that came from the neighbourhood of St. Petersburg?—I rather think that it was one of the St. Petersburg lot.

3252. Can you answer that question more definitely?—No, I could not be positive.

3253. Was the attention of any veterinary surgeon or of any Government officer attracted to the circumstance?—Not one. All the attention it attracted was to force me to take them, both bad and good.

3254. If they tried to force you to pay for the animal, they would probably remember the case, if it was alluded to?—Of course they would, if they wished to do it; but they were very anxious to try to conceal it as much as possible, because I believe that they had another contract entered into with the firm of Hönck and Baker. When I got the short delivery of 103 oxen and so many sheep, I made a protest in Russia about it, and I wanted to go to law for the short delivery; but Mr. Hönck told me that he was making another contract with them, and he asked me not to make any noise about it until he had got settled for the other lot.

3255. Will you state the date of your leaving Revel?—The 23d of May last.

3556. Did you touch anywhere on your passage to England?—Yes; at Copenhagen.

3557. Why did you touch there?—On account of some scheme, I could not understand what it was, for the oxen were entered in the manifest as for Lowestoft, in order to cheat the Government here, so as to make the Government believe that the steamer would land the cattle at Lowestoft; but they were never intended to go to Lowestoft; they were

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landed at Hull, and were never examined by any veterinary surgeon there.

3258. What was the result of your touching at Copenhagen?—We got a little hay there, which we did not require, and some water; but the result was that there was a telegraph for Mr. Hanson, an agent of the owners of the ship, to the captain, to put in at Hull.

3259. When you left Revel to what port did you expect to go?—According to the letter of Mr. Hönck to me, stating that to avoid the doctors they were going to Lowestoft, I fully expected they were going to Lowestoft, and I reasoned with the captain about going to such a port, and incurring expense there; but he said, "You have nothing to say to it; I have the "directions of the owners of the ship."

3260. Did anything particular occur with those cattle on the voyage?—Nothing more than that one of them got very unwell, and I had to get some brandy for it.

3261. Did the animal survive the attack?—Yes, he lived to come to London, and he was sold in the London market. He was a good four-year old ox, and Mr. Hönck said that he would keep it for grass, but I said, "Do not attempt to keep it, as he has been "unwell already."

3262. On what day did you arrive at Hull?—On the 29th of May.

3263. On arriving at Hull were the cattle inspected by the Government officers?—No, certainly not; if there were Government officers there there could be no inspection when 321 beasts were turned out upon the quay loose, and men stopping them in front, and the animals going about all the time. There were rails along the landing place at Hull for the purpose of tying the oxen up to be examined. I do not know for certain, but Mr. Hönck had been down to Hull before the arrival of the oxen, and to the best of my belief he arranged with the inspector to be out of the way.

3264. Do you know the name of the inspector?—I do not; but if the cattle were examined they should have been tied up in a row. No man could examine 321 oxen as they were, all loose on the quay, and the men stopping them and beating them.

3265. Did they attempt to examine them?—If they did I should have seen them, as I was there all the time.

3266. What became of them?—I drove up with them to a field outside the town; they were watered in the yard, and put into this field, and then, contrary to my wish and protest, a man named Coulson, a salesman of Hull, draws 120 of the best beasts, then he takes 14 out of those 120, and sells 106 at 11*l.* 10*s.* each. I telegraphed to Mr. Lambert, a first-rate salesman at Manchester, to look after the sale of the oxen; and he writes to me to say that they were sold in less than an hour; for over 14*l.* apiece. They weighed 15, 16, and 17 cwt. apiece, and were fine good fat oxen.

3267. What became of them after Mr. Coulson bought them?—He sent them on to Manchester that same day, the 29th; he sent 106; he drew 120 of the best, and he turned back 14 of the worst out of the 120.

3268. I thought the number was 146?—There was a man of the name of Hickman that got 40, and they were sent on to Manchester, and they were delayed by the railway, so that they were not in time for the Manchester market, and they had to go Wakefield, and were sold there for 13*l.* 5*s.* apiece.

3269. To whom were they sold?—That I could not answer. Mr. Hickman could tell that.

3270. You never traced them any further?—No; nothing further than the sale. I have Mr. Hickman's letters of the sales, but he does not state the names of the parties to whom he sold them.

3271. Have you never found whether any disease has been directly traced to those animals?—No, I never did; it is out of my way.

3272. Was the sick animal, or any of the animals that came from St. Petersburg, among those animals which were sent to Mr. Hickman?—Yes; the sick animal came direct to London, and it stopped one day and one night in Maiden Lane.

3273. Did any of those animals which came from St. Petersburg come to London?—Some of them.

3274. Some of them were sold to one of those gentlemen?—Yes; Mr. Coulson drew out a lot of them.

3275. Then the remaining 175 came by rail to London?—Yes; they were sold here in the market.

3276. It is the case, is it not, that 20 were sold on the 31st of May by Mr. Baker?—Yes; he took them out of the yard at Maiden Lane to go to Gosport, and the remainder were sold the next day in the cattle market on the 1st of June.

3277. Have you ever been able to trace them further than that sale?—No; but I have no doubt if you were to get Mr. Lambert of Manchester and give him notice he would be able to find out where they went; he is a very extensive salesman; and there were a lot of 328 sheep that went there too.

3278. What became of those sheep?—Mr. Coulson sent them to Manchester, and they were sold there, the whole lot, I believe; at least they were returned as sold at Manchester at 13*s.* a piece. They were four years' old wethers with a year's wool on, and on the cargo Hönck and Baker returned me a profit of 15*s.*

3279. Where did you get those sheep?—All in Esthonia. There were a good many lambs dying when I was in Esthonia that winter.

3280. Of what disease?—Scouring.

3281. Do you believe that the Rinderpest was communicated by this cargo to England?—I am of opinion that it was, because coming from such a distance it could not be communicated very well in the air; it must have come in the skins or in the systems of some of the animals. And again, the way in which they crowd those animals on board the boats is fearful. We had 10 on deck for four days, and on that voyage the steamer only carried 321; whereas now she is carrying 340, and 1,300 sheep, so that it is fearful work; it is packing them in like herrings.

3282. Have you been much connected with the cattle trade?—Yes, a great deal, for many years.

3283. In what way?—Buying and selling.

3284. (*Mr. Read.*) You stated, did you not, that the best cattle came from St. Petersburg?—They did.

3285. If there were 46, how came you to select only 13?—Because they were injured in their backs and loins from being in waggons; they were carried in four-horse waggons to be in in time to supply the contract.

3286. How far is St. Petersburg from Revel?—350 versts, and there are 1¾ versts to a mile.

3287. You say that the 640 cattle which came from Esthonia were sick and lean?—Miserably so; some of them were scarcely able to walk, and I had seen many of them lying about the roads in the streets. Not speaking much Russian, it is a very difficult thing to learn what is going on in the country; there they speak Esthonian, Russian, and German.

3288. You say that you sold four cattle in the yard at Revel?—Yes; to a butcher.

3289. What for?—For being sick and lame.

3290. That was after you had purchased them?—Yes, after I had purchased them, because they insisted upon my taking them. They stopped my passport, and thought to frighten me very much. It is an awkward thing to be in a country like that, and to have your passport stopped, and you doing no harm. I have had all the papers connected with the matter, and I sent them to the Government of this country, to see if I could get redress, but they said that they could not interfere.

3291. You think that the cattle which you sold to the butcher were suffering from the disease called Rinderpest?—Yes; two of them, from what I hear of it since. I have never seen a beast affected with it in this country.

3292. I suppose you have read a description of it?—Yes; and I think that it is quite similar to what I saw in Russia.

3293. Do you mean to say that the disease is common in Russia?—Yes; it is very common in Russia, but not so virulent as here. It will go into a house where there are 100 beasts, and only kill one of them, or 50 beasts, and only one will die; but it is always brought down from the steppes, where the plague is indigenous. The Esthonian and Livonian men are obliged to get down those steppe oxen. They are so much larger to feed, and they fatten better, and the plague is generally communicated by them; they bring some disease with them. Our vice-consul and his brother belong to the committee. He is a Russian, named Girard, and his brother is another member of the society.

3294. (*Mr. Ceely.*) I think you stated that the ox that was sick on board recovered?—It lived so far as to come to London and be sold here.

3295. Do you think that it had the disease?—I do, and I said so at the time.

3296. It had a running from the eyes and nose?—Yes; and it was so when it came to London.

3297. At what time did it come to London, do you recollect?—On the 30th of May.

3298. (*Professor Spooner.*) You have not said on what day after your starting from Revel this animal was attacked?—On the 28th of May the ox took unwell.

3299. You arrived in Hull on the 29th, so that you had only two days to treat it?—Yes, that is so; the 28th and the 29th. In fact, I gave it no treatment whatever. I only turned it out amongst the others when I landed at Hull, but on board I gave it plenty of brandy.

3300. What were the first symptoms which drew your attention to that ox on board the ship?—His lying down so much, and refusing his hay and water.

3301. Did he chew his cud?—No.

3302. Did he purge?—He did.

3303. I believe none of the animals purchased by you were actual steppe oxen?—Not one of them was a steppe ox that I purchased, I believe, because the colour of the steppe oxen is a sort of grey.

3304. Have you really yourself seen the disease called the Rinderpest affecting any animals in Russia?—No; only the one in the yard that I sold, and this one which I had on board. I did not see any in the houses.

3305. You have had considerable experience, have you not?—Yes; I have been through a great many of the houses, but then perhaps they would not let me see them; they were very cautious. I only looked at those that were put up for myself to feed for me. I did not remark any oxen that were in the houses. I did not go to look at them; only at those that were put up to feed specially for me.

3306. Can you assert to this Commission, that in your belief those animals which you sold at Revel to the butcher were affected with the Rinderpest?—One of them I can; at least that was my belief at the time.

3307. And you knew at that time that that disease was a highly infectious disease?—I did not; I knew nothing of that. I could not know anything of it. I did not know that it was the Rinderpest at the time, but from reading a description of it since, and hearing of it, I believe it be so now.

3308. I want to know whether at the time that you disposed of this animal to the butcher you were conscious that it was suffering from the Rinderpest?—No, I was not; I was conscious that it was a disease, and it appeared to me that he would not stand the voyage, and that I should be much better without him, and I never should have had him if the society had not forced me, and stopped my passport, and insisted upon my taking it.

3309. (*Dr. Playfair.*) How many days before you embarked was it that you sold those four beasts?—Three days before I embarked I sold three, and one the day before I embarked.

3310. Do you recollect which one it was that you sold the day before?—Yes; it was the sick one the day before.

3311. How long had that sick beast been in your yard?—About four days.

3312. And the voyage occupied six days; did it not?—Yes.

3313. Then there would have been ten days between the time that this infected beast was in your yard and the time of arriving at Hull?—Yes; it would be so.

3314. Do you know that the time in which the disease is communicated from one animal to another is eight days?—No, I do not.

3315. If that is so, would you not have expected, if it had been the Rinderpest, that it would have been extensively distributed amongst the other beasts in the yard?—No; because very few oxen are affected in the same house in Russia with this disease; it does not spread the same as it does here.

3316. You state that the disease in Esthonia only kills one out of 50 beasts?—It does not take any more. I have known 100 in a house where only one died.

3317. And you still believe that that is the Rinderpest?—I do.

3318. Are you not aware that in Russia the mortality amongst the Russian cattle which are not steppe cattle is fully from 75 to 85 per cent.?—No, I am not aware of that.

3319. So it has been stated in evidence; and that of the steppe cattle 50 per cent. die with the Rinderpest, and you still believe that the Esthonian disease which only kills one beast out of 50 was the Rinderpest?—That was all that I heard of it killing; namely, one of a house where there were 100; and a gentleman showed me a beast that he had put in instead of it, and it was one of the largest that he had.

3320. You think that a disease with such a slight mortality is the Rinderpest which is now raging in this country?—Yes, I believe so.

3321. Were the whole of the cattle that you brought to London sold on the 1st of June in the Metropolitan Market?—Yes; 175, apparently.

3322. You never heard of them coming again to the market?—I did not hear of it; they might have come for all I know, because there is such scheming with some salesmen that I cannot tell. I saw Mr. Baker picking out 20 to go to Gosport without telling me. They should have been sold in open market.

3323. You stated, did you not, that that sick beast to which you have referred went to London?—I am certain of it, for I saw it on the stand, and Mr. Höneck said that he would like to keep it for grass, it being a fine ox, four years old, but I said, "Do not attempt it, "for that is the beast that has been sick."

3324. Did you not see the veterinary surgeons, Mr. Lockwood and Mr. Freeman, upon the quay, when you arrived at Hull?—I do not know them.

3325. But is it likely that two veterinary surgeons would be inspecting beasts upon their landing, and you not have observed it?—They might have been inspecting, as far as merely looking at them cursorily, but not to touch them or meddle with them, or handle them about. I should have remarked them at once if they were inspecting them and looking closely after them, because my business in landing was to make the men take off their head ropes, because they were new strong Russian head ropes, and they would have injured the oxen.

3326. Would you be surprised to learn that the Custom House authorities reported that the cattle and sheep brought by "the Tonning" from Revel were carefully examined by two veterinary surgeons, who certified that they were free from infectious disease, and fit for delivery?—That is quite incorrect, because if they had carefully examined them they would have stopped this beast, and if they were examining the oxen I had my eyes about me to see what they were doing, and they could not have been

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examined without my seeing them, because it was a most important part of my business to see that they did not cast any without due cause, and of course if they carefully examined them or examined them at all they must have stopped this beast.

3327. Was there much foot and mouth disease amongst the cattle?—Not at all.

3328. Why did you go to Hull?—The captain had orders to do so. My partners in London had the whole direction of the matter, and they were the owners of the steamship as well. I may mention that there was one sheep sick on board, and that sheep had to be carried on shore, and if the inspectors had examined it they should have mentioned it.

3329. (*Dr. Jones.*) Did the four oxen which you sold at Revel, because they were sick, come from St. Petersburg; were they all St. Petersburg oxen?—They were not all St. Petersburg oxen; but I could not tell you where they came from.

3330. I mean the one which you think had the Rinderpest?—Yes; I think that that was a St. Petersburg ox, but I am not sure.

3331. You told us, I think, that you thought two had the Rinderpest?—Yes; two.

3332. Are the Commissioners to understand that it was one or two?—Yes; two of the four that I sold had the Rinderpest.

3333. The two that you think had the Rinderpest were amongst the other cattle, were they not?—Yes, they were.

3334. You said that the animal that was ill laid down, and did not chew the cud. Was there anything else that you saw?—Running from the eyes and from the nose, and when he was standing up he would stand rather bent.

3335. Was the breath quiet?—I do not know about that, for I did not go so close as to examine that.

3336. Did you inform Mr. Hönck and your partners at the time the animals came from St. Petersburg that they were not all Esthonian cattle?—Yes.

3337. How did you inform them?—I told them that they brought me in a lot. This Mr. Gerard, the consul at Revel, was Mr. Hönck's agent and my agent, at 2½ per cent. on all money laid out; and he wrote to Mr. Hönck, complaining that I would not take those 46 beasts that came from St. Petersburg. Mr. Honck said to me, "What is the cause, and what "about those 46 beasts?" I said to him, "They "came in four-horse waggons, and in tying them, "and putting them in and out, they injured their "backs and hips, and one thing and the other, and "they were not fit for me to take."

3338. He was aware that you refused those 46 animals?—13 out of 46 I took.

3339. Was he aware that you took 13 out of the 46?—Yes. The secretary of the agricultural society was by, and they gave some money to my man to untie the oxen, and slip them in again round where they were, and so I told the man that it was all nonsense, and made him walk them out deliberately before the secretary, to show that they were unable to walk; they were so much injured that I could not take them.

3340. (*Dr. Jones.*) Will you inform the Commission what it was that first attracted your attention to the one which was taken ill on the 28th of May?—His lying down, and refusing his hay and water, and not eating or chewing his cud.

3341. Was there any difference between his illness and that of the one which you sold the day before you left Revel; was there any difference in the appearance of the animal?—No difference, except that the one which I sold at Revel was in a much better condition.

3342. Which was the worst?—This one that I brought here was the most ill decidedly.

3343. But this one recovered so that he came to London?—Yes; he came to London, and was sold in the market.

3344. (*Professor Spooner.*) I think you said that instructions were sent to the captain of the ship for him to land those animals at Lowestoft, with a view to avoiding the doctors?—Mr. Hönck wrote to me, stating, "I have ordered the things to come to Lowestoft, where we shall run no risk of the doctor."

3345. Was any previous communication made by you to Mr. Hönck, leading him to suppose that those animals were diseased animals, and that they might possibly be stopped by the doctors?—None whatever from me; but I had sent him newspapers.

3346. Did those newspapers contain anything about that?—I believe one of them did contain something about the steppe disease at the time, and that the cattle were selling cheaper on account of it.

3347. And you think that possibly from that information Mr. Hönck was induced to write to you, to say that they should be landed at Lowestoft?—I cannot say what was the cause of it, but his letters state that. I have shown them to Professor Simonds, and if the Commissioners wish to see those letters and documents they can do so.

3348. (*Chairman.*) I think it is desirable that you should produce those letters before the Commission; have you any objection to do so?—Not the slightest. I will send the whole of the papers to the Commissioners.

3349. (*Dr. Playfair.*) You are aware that the Esthonian Society deny altogether the existence of disease in that part of the country?—Yes.

The witness withdrew.

Mr. Alderman Phillips, Mr. R. L. Hunt, and Mr. W. Hanman examined.

Mr. Alderman Phillips, Mr. R. L. Hunt, and Mr. W. Hanman.

3350. (*Chairman.*) (*To Mr. Alderman Phillips.*) I believe you are Chairman of the Market and Fair Committee of Birmingham?—I am.

3351. Have there been any cases of the Cattle Plague in Birmingham?—I am not aware, with one exception, and that is some weeks ago, of any introduction of the Cattle Plague into Birmingham; that was a calf which was bought in the market and taken away, I think, into the neighbourhood of Hampton-in-Arden, and there two beasts were infected, and the calf died and the two beasts died.

3352. Is that the only case that has come under your knowledge?—Yes; that is the only case that has come under my knowledge. I believe there has been another case, but that Mr. Hunt can speak to, and Mr. Hanman also.

3353. Is there much of the Cattle Plague in the neighbourhood of Birmingham?—Not as far as my knowledge extends, but that question Mr. Hunt will answer. He has a large district to inspect, and he will tell the Commissioners the result of his experience.

3354. (*To Mr. Hanman.*) Are you the Superintendent of the Smithfield Market of Birmingham?—Yes.

3355. Appointed by the Market Committee?—By the Council of the Borough of Birmingham.

3356. What is your profession?—That is my profession. I am clerk and superintendent of the market.

3357. Were you connected with any trade or profession before you were appointed to that office in the market?—Yes; I was in the corn trade before.

3358. Have many cases of Rinderpest come to your knowledge at Birmingham or in the neighbourhood of Birmingham?—Not a great many; there have been but very few.

3359. Have there been any steps taken at Birmingham to meet the case of the Rinderpest coming to the market?—We have closed the entrance gates

with the exception of one, and the inspector attends on the opening of the market at that gate and inspects all cattle coming in.

(*Mr. Alderman Phillips.*) Immediately on hearing of this Cattle Plague spreading over the country, I directed that the whole of the dormitories and other places for the cattle should be thoroughly lime-washed, and then I ordered that the beasts should be brought in at one gate in the market, all the others being closed, the veterinary inspector standing at the gate to inspect every animal that came in.

3360. And by that means you detected those cases to which you have alluded?—No, not a single case has been detected that I am aware of; the calf that I spoke of was taken away without its being known that it was diseased, and the other cases Mr. Hunt will tell you about; some two beasts were taken away, and I believe some serious consequences resulted; that was as much as six weeks ago.

3361. (*To Mr. Hanman.*) Can you state the circumstances of the case to which Mr. Alderman Phillips has alluded?—The calf came into the market on the 7th of September; it was taken home, and on the following day it was seen to be sickly; it refused to take its food, and it gradually grew worse till the 14th, and then died. On the 16th two cows upon the same farm were taken ill, the inspector of the district was called in, and he saw them, and he declared that they were both suffering from Rinderpest, and the beasts were at once destroyed and buried.

3362. Where was it that those animals were taken ill and died?—At Hampton-in-Arden, eight miles from Birmingham.

3363. Do you know where the calf caught the disease?—I do not; we have not been able to trace it, but we have every reason to believe that it came from the neighbourhood where some Dutch beasts had been. We have no positive evidence on that point though we have every reason to believe so.

3364. Are all the animals coming to the market at Birmingham inspected by you?—By the veterinary surgeon, Mr. Hunt, or his partner Mr. Parker.

3365. What is the number of cattle that come to your market ordinarily?—Last year we received 25,000 head of beasts during the whole year. We have two markets in the week, Tuesdays and Thursdays.

3366. Is the market principally for store beasts or for fat beasts?—There are very few store beasts in our market; until three years ago we received large quantities of store beasts, since then the store trade is falling off very much; the farmers will not buy them, and the dealers do not bring them. I may say that not more than 20 or 30 head of store beast stock in a day are to be seen in our market.

3367. Then the stopping up of the store markets in the kingdom would have very little effect on Birmingham?—Very little indeed.

3368. Could you describe how the trade in fat stock is carried on in Birmingham?—We receive large supplies from London and large supplies from Liverpool, and the rest are made up from local markets and fairs; we get very few brought in direct by farmers; they are brought in by dealers.

3369. Do the London dealers buy the animals in the Metropolitan Market and send them down alive to Birmingham?—We have dealers who come to London from Birmingham and buy them alive on the Monday market and take them down on the Monday evening, and they are exposed for sale in our market on the Tuesday, and they are sold alive. Lately we have been receiving a great many foreign beasts.

3370. Taking the home beasts first, what becomes of them after they are sold in the Birmingham market?—They are distributed through the town and the surrounding district 10 or 12 miles round through South Staffordshire and the mining districts there; a large number go into that district.

3371. They are bought by butchers, and taken away alive from Birmingham?—Yes; and slaughtered for their own purposes two or three days following.

3372. You are aware, are you not, of what is called the Consolidated Order in Council which, with regard to the Metropolitan Market, restricts the cattle which are sent there to those that are sent for the purpose of slaughter?—Yes.

3373. Cattle are imported now into the Metropolitan Market?—Yes, I believe they are.

3374. And those cattle come down to Birmingham?—Yes, I believe they do.

3375. If, therefore, they were in contact with animals infected with the disease in London, they would communicate the disease to any animals standing near them in Birmingham?—No doubt of it.

3376. Have you considered a suggestion which we have had made to several witnesses here as to restricting all movement of cattle throughout England, that is to say, having all cattle slaughtered at the place where they are grazed, and only having in towns a dead-meat market?—I have not considered it.

3377. What do you think would be the effect of such a regulation?—It would be a great inconvenience to the inlying districts. I do not know how we should get a supply for the whole of our district, if our markets were stopped.

3378. Do you think that the farmers in the neighbourhood would not be able to send you meat in sufficient quantities?—Decidedly not. I may say that fully three fourths of the stock that is killed for Birmingham and the surrounding district comes from long distances alive.

3379. You have spoken of foreign stock; do you get a very large number of foreign beasts at Birminghom now?—Yes, a great many Dutch beasts.

3380. Do they come direct from the port where they are landed?—They come right through from the Metropolitan Market. We have dealers who attend here weekly for the purpose of purchasing them.

3381. Supposing there were a modification of the suggestion, and that animals were sent to the market alive, but were not permitted to leave it alive, what would be the effect of that upon Birmingham?—I think that it would prevent a great quantity being brought. No man would like to run the risk of bringing stock to market, and not have the option of taking them away. The buyers would say, "Here "is a man who has got a lot of beasts; he is not "permitted to take them away, and we will bid him "only so and so," and that would very soon close the market.

Mr. Alderman Phillips.—We have not the means at Birmingham of slaughtering to any extent. We have not any public slaughter-houses. There are many private slaughter-houses, but not even sufficient of those to supply the town. Almost every butcher has a slaughter-house at the back of his shop.

Mr. Hanman. There are about 400 slaughter-houses in the borough of Birmingham.

3382. Are those slaughter-houses registered?—Yes; they are registered and licensed.

3383. Are they healthy and in a proper condition?—Yes; I may say that they are daily inspected.

Mr. Alderman Phillips.—They are under very strict supervision. There is a person appointed specially to go round and examine the slaughter-houses, and see that they are in a proper condition, and the garbage and everything of that kind is taken away at the proper time, and not allowed to be there more than 24 hours.

3384. Supposing that an order was issued by the Government that no animal should leave a town alive that came to market, would you not be able to afford greater facilities for slaughtering in Birmingham?—I think not. The neighbourhood of Birmingham is extremely populous; it is what is called the black country. There are Wolverhampton, Dudley, Walsal, and a vast population between Birmingham and those towns, and the butchers get their stock from Bir-

Mr. Alderman Phillips, Mr. R. L. Hunt, and Mr. W. Hanman.

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mingham alive, and take it to those places and slaughter it. I do not think that we should be able to slaughter for the immense population of that neighbourhood. We have a population at Birmingham of 300,000; Wolverhampton has between 70,000 and 80,000; and in Bilston and in many of the smaller towns there is an immense population.

3385. Is there not a considerable market at those large towns?—At Wolverhampton there is a very large market; at Dudley the market is small; Dudley, Brierley, Stourbridge, and all that part of the country is very densely populated. We have been singularly fortunate in not having this disease brought into Birmingham; we have heard nothing of it, except in the case which occurred six weeks ago. I imagine that nearly the whole of our fat stock, coming as it does from the Metropolitan Market, has been inspected by proper persons appointed here, and then it gets a second inspection in Birmingham, so that we take pretty good care that the disease does not spread with us. An animal that was found to have it would be taken away immediately.

3386. Still, from the case that you have quoted, there are instances where the disease has been spread by having a diseased animal in your market?—I think we have had no case of a diseased animal standing in our market.

3387. But you can imagine how readily it might happen?—Yes, it might happen certainly; but we take every possible precaution.

Mr. Hanman.—We also disinfect the market with chloride of lime.

3388. (*To Mr. Alderman Phillips.*) I have no doubt that you appreciate the magnitude of the calamity which has befallen the country. What precautions would you advise to be taken to stop the spread of the disorder?—It is so large a question that I would not venture upon an answer; it is a matter which requires great consideration.

3389. What would be your opinion as to stopping the fairs and markets?—It would be extremely injurious to a large population such as we are surrounded by to stop the markets. We have not many fairs at Birmingham. We have only two fairs in the year, but to stop the markets would be a great calamity.

3390. There is no doubt that it would disturb trade very much; but there are some things, are there not, which you cannot find a remedy for without disturbing trade?—I think that such a remedy as that would be worse than the disease. We have no large graziers in our neighbourhood, and we could not go away and buy a sufficient quantity of cattle for the people. We are supplied almost entirely from Ireland and the foreign beasts which we get from the Metropolitan Market. The number of beasts that we get from the neighbourhood is very small.

Mr. Hanman.—Fully 75 per cent. of all that is sold in the Birmingham market comes from outlying districts. I mean taking Ireland and taking the supplies which we get from London and Liverpool.

3391. (*To Mr. Alderman Phillips.*) With regard to foreign beasts, supposing the suggestion were carried out which has been made to us, of having a large market at the landing place, at some place on the Thames, or at other ports, and then having the animals sold and slaughtered on the spot; could you not be supplied with meat from a market such as that?—In the winter time we could very likely be supplied in that way when arrangements were made. It would take some time to make arrangements for that purpose; but it would very much enhance the price, and the poor people would get no meat.

3392. The question is, whether it would be practicable?—I should hardly think it would, to supply the whole country, as we depend so much upon foreign stock. I read sometimes that there is scarcely anything but foreign stock in the Metropolitan Market, and you have London to supply as well; and if the whole of the cattle were to be slaughtered on landing, and you had to supply the Metropolitan district as well as the country, it would require an enormous establishment to carry out a plan of that kind.

3393. (*To Mr. Hanman.*) Could you state the number of foreign cattle that come to Birmingham?—I should say that 75 per cent. of the quantity sold are Irish and Dutch beasts, and I should say that we are getting now about 40 per cent. of foreign cattle.

3394. (*To Mr. Hunt.*) Have you any suggestion to make to the Commissioners as to the best course to be adopted for stopping the spread of this disorder?—I am personally perfectly well satisfied with the Order in Council. At the present time we have found it work well with us, and if the order is only worked out as rigidly as it is in our neighbourhood, the thing is quite sufficient for the want.

3395. Of what district are you speaking now?—Of Birmingham.

3396. We understand that there is very little disease in that district?—I could mention every case that has occurred. I can tell you what cases we have in existence now, and I can also tell you that we have had four distinct and separate outbreaks in four distinct and separate spots, and in each of those cases which have come under my observation I have succeeded in quelling the disease, and it is now come down to one narrow point on one farm, where I believe that the whole of the stock will eventually die; but it is there and there alone. We have received very ready co-operation on the part of all right-minded persons round the district. I am the inspector of five districts round that neighbourhood, including a portion of Warwickshire, Worcestershire, Shropshire, and Staffordshire, all of which just impinge upon Birmingham; and I was placed as inspector of those districts so as to enable me to follow any dealers that might want to escape the observation of the inspector in one county and to slip out of it into the other. By the powers which I hold, and which are amply sufficient to attain the end in view, I have now accomplished that; in three instances out of four the disease has been stopped entirely, and I have got a clean bill, with the exception of one farm.

3397. What means did you adopt?—Simply those that were laid down by the Order in Council; by firmly carrying out those orders. I have not been a universal destructive; in fact I do not think I have ordered one beast to be killed. Where animals were killed with a view of preventing the disease from spreading I have seen that they were disposed of. I have seen that they have been properly killed, and the skins properly disinfected, and the bodies disposed of in the manner that was ordered. But those are the only means that I have adopted.

3398. You are probably a very competent inspector; but supposing the case of a district where there was no good inspector, what would happen then?—I do not think we have any right to have bad inspectors. I think that there are plenty of good inspectors who can do simply what I have done, if they will only follow out the Orders in Council.

3399. Supposing we had strong evidence to show that the Orders in Council have not been sufficient, have you no remedies to suggest?—I have nothing to suggest in the way of remedy, because I have not needed anything further.

Mr. Hanman.—No doubt a great deal of this disease has been promoted by the present system of railway traffic.

Mr. Alderman Phillips.—The filthy condition in which the railway trucks are, in which cattle are conveyed from one town to another, is almost sufficient to give disease of a very virulent character; and we have to take into account, not only the filthy condition of the trucks, but also the length of time that cattle frequently go without having water in hot weather, crowded together as they are, so that they sometimes trample one another to death. I think there is more mischief caused by the manner in which the railway companies convey cattle from one place to another than by any other means.

3400. (*Mr. Read.*) (*To Mr. Hunt.*) I think you stated it as your opinion that the Orders in Council are sufficient if they are properly attended to?—Yes.

3401. Are you aware that there is an Order in Council now, that all cattle that go into the Metropolitan Market are to be sold entirely for the purpose of slaughter?—I have heard so.

3402. Do you think it is carrying out that Order in Council that those bullocks that are sold in the Metropolitan Market should go to the Birmingham Market, be exposed there for sale, and perhaps again sent into the country?—I should fancy that there would be an infringement of that order in the very fact of sending them from London into Birmingham. I should think that that was not what was meant by the order.

3403. You have heard Mr. Hanman state that they do go down?—Yes, and I have seen them weekly myself.

3404. (*Dr. Playfair.*) (*To Mr. Hanman.*) If, for any temporary measure, the importation to the Birmingham market of the foreign stock and the Irish stock were prohibited, except as dead carcases, would you not have abundant slaughter-houses to slaughter the remainder?—I think not.

3405. You would only have 25 per cent. of your cattle left. There are 75 per cent coming from the Dutch and Irish markets. Have you not sufficient accommodation in Birmingham to slaughter the remaining 25 per cent. of the cattle that come to the market?—Yes, unquestionably we have. Yet it will be necessary to provide a much larger quantity than the 25 per cent.

Mr. Hunt.—Perhaps I may be allowed to add that all the cases of disease that have existed in our neighbourhood have been clearly traced to animals that came from the Metropolitan Market, and that has been so in every instance with the exception of the calf, and we could not find out the vendor of that calf. It was purchased in the market in the lax manner in which very many purchases are made in the market, the buyer merely looking at the animal as being worth so much money without finding out where it came from. I made a journey of inspection all round the district where the vendor of this calf was supposed to live, but I could not trace it to him, and I was unable to find out where the animal obtained its disease from; but in all other instances that we have had I have been able clearly to trace them to animals from the Metropolitan Market, and, in all cases but one, to foreign animals, but that exceptional case was a Hereford beast which had been exposed for sale with foreign beasts in the Metropolitan Market before coming down to Birmingham. I am giving the Commission now the result of my experience as veterinary inspector of the district, and not of the Birmingham market alone. My experience of the disease in the Birmingham market has been very limited. I have never yet had to reject a beast that has been exposed for sale in the Birmingham market, and there have been only two instances that we could trace of its ever having existed in that market.

3406. (*Chairman.*) You are aware that there is considerable difficulty in detecting the disease in its early stages?—Yes.

3407. And it is therefore quite likely that an infected animal coming from the Metropolitan Market might be exposed for sale in the Birmingham market without your being able to detect the disease?—Yes, and capable of disseminating the disease while in that state.

3408. (*To Mr. Hanman.*) Is there a large dead-meat market in Birmingham?—There is.

3409. Where does that meat come from?—It is principally killed by the carcase butchers in the borough, the animals being purchased in the market, and taken to their slaughter-houses, and then taken to the dead-meat market.

3410. Is dead meat sent from London or Scotland to be sold at Birmingham?—No.

3411. They are all slaughtered in Birmingham?—Yes, they are all slaughtered in Birmingham.

3412. (*Mr. Read.*) (*To Mr. Hunt.*) As you are such a distinguished member of the veterinary profession, I should like to ask your opinion about fairs and markets for store stock; do you not think that it would be very necessary to suppress them?—That is my opinion, decidedly.

3413. (*Chairman.*) You would not extend that to fat stock?—It is too large a subject almost for me to grasp, but I do not think I should extend it to fat stock.

3414. Do you not believe that there is danger from having a fat-stock market?—There is danger wherever there is a large congregation of beasts.

3415. You refer to the danger arising from a diseased animal sold to a butcher being taken to another part of the country remaining alive some days before he is killed, and communicating the disease to its neighbours?—Yes, no doubt. I have known cases in point.

3416. (*Mr. Read.*) Would not that danger be very much mitigated if all the cattle that entered the fat stock market were not allowed to leave the town alive?—No doubt.

3417. Would there be much danger then, do you think, of the propagation of the disease from that fat-cattle market?—There would be little or none, because it is cattle going into the country that produces the disease. In fact, the retention of the beasts in the town would be little or none, for those beasts would be in close places where other beasts would not come to them.

3418. (*To Mr. Alderman Phillips.*) In many cases that have come before us, that plan might be possible, but you do not think it would be so in the town of Birmingham?—No. Many cattle are purchased and are sent to a butcher who has ground in the neighbourhood, and he sends his cattle out to graze in the summer time, or he buys cattle that he wants the next week or the week after; and those cattle are sent out into the fields.

3419. (*To Mr. Hunt.*) Will you state to us what appointments you hold?—I am a veterinary surgeon, and a member of the Council of the Royal College of Veterinary Surgeons, and assistant veterinary inspector to the Royal Agricultural Society of England. I am appointed cattle inspector to the district of Birmingham, and I hold four other appointments besides that at Birmingham. I am veterinary inspector to four petty sessional divisions surrounding Birmingham, besides the borough.

3420. (*Chairman.*) (*To Mr. Alderman Phillips.*) Have you anything further to suggest which you think would be valuable to the Commissioners?—No; we came here to give any information that we might possess, but we have not prepared ourselves to offer any suggestions.

The witnesses withdrew.

JOHN CLAYDEN Esq. examined.

3421. (*Chairman.*) You are, I believe, chairman to the Agricultural Hall Company?—I am.

3422. Are you in any other way connected with the cattle trade?—I farm about 1,800 acres of land; 1,000 under Lord Braybrooke, and nearly 800 of my own. I am mayor of the borough of Saffron Walden in Essex; and we have shut up the Saffron Walden market for six weeks last Saturday, also the fair on the first day of November next.

3423. Will you give the Commission the benefit of your evidence as to what you consider to be the best measures to stop the spread of the Cattle Plague?—My wish would be that every head of cattle should be confined to the spot where it now is, for at least

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one month. The disease is of the most virulent and most contagious character, and it requires the most active measures to counteract it, and this season of the year is the best that could be adopted for that purpose. Meat will keep good for a long time, and the means of conveyance in the country are exceedingly good, and there is no frost to affect the quality of the meat. There are very few farmyards in which a shed could not be soon formed for a slaughter-house. I do not mean to say that it would be as good as a butcher's slaughter-house, but it could be formed; and if you could confine the disease to the place where it now exists, for one month, which would entail the slaughtering of all foreign cattle near the port of disembarkation, it would have a very beneficial effect. I should have in my pocket a book written by Mr. Webber, which I think your Lordship has had sent to you. He wrote to me this morning to say that one had been sent by Sir Fitzroy Kelly. In this book he recommends the putting of all foreign cattle in quarantine for three weeks, but if I were an importer of foreign cattle I would far more readily have them killed on the spot, and slaughtered at the outports, than put in quarantine, because the quantity would keep accumulating, and the meadows near the port of disembarkation are all low and marshy, and a very bad description of meadows for cattle to lie in for three weeks, and of course would be very likely to breed the disease in cattle lying in them for that time.

3424. Will you state to the Commission why you consider those strong measures necessary?—Because of the contagious character of the disease, and the loss that it entails both to the purchaser and the seller and the consumer.

3425. If you take the case of store animals first, is it your opinion that store animals congregating together in a town acquire the disease, and that when they are sold they spread it through different parts of the country?—Yes; without doubt, and the profits of farming are now cut down so low that the graziers buying cattle for grazing cannot afford to lose a bullock; they can scarcely afford to lose his tail, and great loss is caused throughout the country through the movement of the store cattle, and the farming interest will be reduced to a most woeful state if this thing is to continue.

3426. Would it not put the breeders of those store cattle to great inconvenience from their not being able to sell them?—No doubt, and to the purchasers also. The disease is of that nature that great inconvenience must be felt, but I do not see when it could better come than now, because the country is exceedingly full of feed, and it is a time of year when cattle will not suffer. We know that there are many grazing farms where they are sold from, but still there never was such an abundance of feed as there is now.

3427. You would stop all movement of cattle?—Yes. I would confine every animal in the kingdom, England, Ireland, and Scotland, to the place where it now is for one month. And in doing that the foreigner would have no cause of complaint, because his cattle would be treated just the same as the English farmers'.

3428. Taking the home trade first, do you think that the butchers' trade could be carried on if all the animals were obliged to be slaughtered on the farms themselves?—I feel sure that it could. There is not a farm on which a slaughter-house could not be made, and it is a time of year when meat would not suffer from exposure. In the winter season the meat would be very much injured by the frost, and in hot weather by exposure to the weather, but that is not the case now.

3429. You think that the trade of the country would readily accommodate itself to this change?—Yes, I believe it would. But those are only partial measures, and would be of no use unless the system were carried out all through the country. I went before our county magistrates on Saturday upon the subject, and they have readily shut up all fairs in our division of the county, and we have shut up our market for six weeks. I also learnt from Mr. Collins to-day, that St. Ives market is shut up for store stock.

3430. You consider it important that all the markets should be shut up, and not individual markets here and there?—I do; I look upon those as partial measures which will do a certain amount of good, but they will not meet the exigency of the case, in my opinion.

3431. Supposing fairs only were stopped, do you believe that there would be a great many private sales of cattle in the country?—Yes; what is there to prevent a man taking animals into his own pasture and selling them.

3432. You think that great mischief would arise through the private sales?—Yes, decidedly; I am now buying bullocks out of Lord Braybrooke's park, which I suppose are secure, and for those I have to give 2*l.* or 2*l.* 10*s.* per head more than I should in the open market, because of fancied security.

3433. There would be a danger in those animals bought in a private way travelling about the country?—There is no question about it. There is great fear just now in removing any animals.

3434. With regard to foreign stock what have you to say?—Nothing; I have the honour of being chairman of a Cattle Plague association in our neighbourhood, and we all feel that it was imported by foreign animals and given to the London cows. We have only had two cases in our district, and they both arose from calves bought from the London dairies. In consequence of our having an association, and insisting upon every animal being killed, we have not had a single case of the disease spreading in our district. In the two cases in which the disease originated, every animal was slaughtered on the farms, and it did not spread, either in the district or in the individual parishes.

3435. With regard to the foreign cattle that come to market, and which are very important for our consumption, how would you deal with them?—I would slaughter them at the port of disembarkation. I would place them on the same footing as English cattle, and you would use the foreign importer more fairly by slaughtering his cattle than you would by putting them in quarantine. Just picture a lot of cattle taken out of the hold of a vessel and put on to a marshy meadow, and having to be there for three weeks; that is more likely to bring the disease than to prevent it.

3436. You are strongly against quarantine, and you believe that it is practicable to kill the animals on shore when they land?—I think so. I am of opinion, as I wrote to Mr. Read, that that is the only plan that could be adopted to save the cattle of the kingdom.

3437. (*Mr. Read.*) Are you not aware that in this next month we require something like 20,000 store stock in Norfolk?—I am perfectly aware of that, and that is the greater reason why the traffic should be stopped. You cannot bring a stronger reason than that, for by the movement of those store stock you will be importing the disease.

3438. Then you would have the stock that are in the grass lands now starved, and our turnips might rot in the mean time?—You must do the best you can with your turnips, and you had better have your turnips rot than have your beasts die; but I do not think that starvation would follow, because I think there is such an abundance of grass and feed this year that if ever there was a season when this plan could be adopted this is that very year.

3439. What would be the harm of allowing the Metropolitan Market to be open, provided that all stock that went in there alive should not leave London?—That would do very great injustice to the sender of cattle. You would be putting the whole trade of England into the hands of the London butchers, and I believe that if you look at the returns

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you will see that the London butchers are now taking more out of this cattle disease than any other class of men living. I am acquainted with several of them, and I tell them so plainly, also the salesmen.

3440. Would there be any objection to having half-a-dozen large fat-markets in London and in different parts of the kingdom ?—I would not have one.

3441. I believe that you are a member of the Council of the Royal Agricultural Society ?—I am.

3442. And that you are also a member of the Council of the Smithfield Club ?—Yes, I am.

3443. So that we may consider you a great agricultural authority ?—I had not thought about coming here to give evidence, but my opinions are very strong indeed.

3441. (*Chairman.*) Would a farmer lose a great deal of money by having to kill his animals on his farm instead of sending them to market ?—I should imagine that he would incur a loss, but it would be nothing in proportion to the loss which is now sustained.

3445. Would he get a market for the different things that he would have on his farm, the offal and so on ?—No; I should imagine that the beasts would be bought by the butcher, who would take all those things and disinfect the skins on the spot. A butcher would come down and buy 20 beasts or more, and he would say, "I will take those beasts, and I shall send "a man down to kill them, and send them away by "railway." I suppose that the butchers would take everything, telling the man in the country that they would buy a lot of good cattle, and take all the risk. I should imagine the bargain would be generally, that the offal should be taken, and the farmer would receive no benefit, but rather loss, because the dealers would take advantage of there being no other market.

3446. (*Mr. Read.*) You think that the inconvenience would principally fall upon the butcher, rather than upon the farmer ?—There would be inconvenience to all parties; but nothing serious to raise a great complaint about. The trade of the country would accommodate itself to it.

3447. Would you extend your prohibition to the movement of sheep as well as cattle ?—Yes, I should. In our neighbourhood, last Saturday three weeks, a man named Giblin of Wethersfield, near Braintree, bought 80 sheep at Colchester market of a man named Johnstone, and on the Monday following they arrived home; 5 died immediately, and they kept dying till Professor Simonds was sent for. Other veterinarians were had recourse to, but they said that it was not the Cattle Plague. Professor Simonds then reduced the lot down to 54, and the other 26 he slaughtered as good for human food. They all died, and they died within 18 days of being purchased.

3448. Were they lambs ?—No; they were wether sheep—shearling sheep. That has made us afraid of this disease; and to prove that this was the disease a man named Raven, whose fields adjoin Giblin's, and where there was a brook not so wide as this table between the fields, had two cows, one of which took the disease and died, and the other he had killed; and another farmer in the same parish had the disease also from those sheep as it was supposed, as the fields adjoined.

3449. Would you attribute that disease to anything but the sheep?—Certainly not; it had not been in the parish before those sheep arrived there. We did not think so much about the sheep until this case happened, which frightened all the people very much.

3450. Have there been any other cases of the plague at Colchester market ?—I feel quite sure that there have been many; but it is a long way from me, 33 miles, and I do not often go.

3451. (*Chairman.*) Have you any other suggestion to make which you think would be valuable to the Commission?—Nothing else. It is a most contagious and dangerous complaint, and I think that strong measures must be used sooner or later.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

Wednesday, 18th October 1865.

PRESENT :

Earl Spencer.	Dr. Parkes.
Viscount Cranborne.	Mr. M'Clean.
Dr. Lyon Playfair.	Mr. Wormald.
Mr. Read.	Mr. Ceely.
Dr. Bence Jones.	Professor Spooner.
Dr. Quain.	

EARL SPENCER IN THE CHAIR.

Mr. N.J. Lockwood.

Mr. Noel James Lockwood examined.

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3452. (*Chairman.*) You are a veterinary surgeon employed by the Commissioners of Customs as inspector of foreign cattle at the port of Hull ?—I am.

3453. Will you state the ordinary method which you adopt for inspecting foreign cargoes which arrive at Hull ?—When the packets come into the roads, if they can get alongside the pier they do, whether night or day. They immediately send word to me or my partner, whosoever's turn it is, that they are about to land. We immediately go down, and the cattle are discharged. They are tied to a rail until we re-examine them, and they they are allowed to go.

3454. How do you re-examine them ?—We examine them when they come off at the gangway, and then when they are untied we examine them again.

3455. Was the examination sufficiently strict before this Rinderpest broke out for you to detect any serious illness ?—I do not think that it was.

3456. But since the Rinderpest has broken out you have made some alteration in the system ?—We have; we used not to examine them twice, but we do now, and when they are put into the portion of our market which is for foreign and Irish cattle we very often examine them, but not always.

3457. Does a very large number of foreign cattle arrive now at Hull ?—A great number.

3458. Can you state the numbers ?—Yes. This is a return for the last quarter.

The witness delivered in the same, which is as follows :

"Port of Hull.

"An Account of the Number of Cattle imported into this Port during the Quarter ended 30th Sept. 1865.

—	Bulls.	Oxen.	Cows.	Calves.	Sheep.	Lambs.	Swine.
	450	3,676	8,109	4,002	19,137	1,015	6,486
Detained -	—	—	107	3	2	1	15
Destroyed -	1	—	5	3	15	—	23
Total imported	451	3,676	8,221	4,008	19,154	1,016	6,524

"Respectfully submitted,
"W. F. Bean, Examiner."

3459. Do you remember a vessel called the "Tonning" arriving at Hull from Revel ?—I do.

3460. Can you state the date of the arrival of the "Tonning ?"—I cannot.

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3461. Do you remember the particulars of the arrival of the "Tonning"?—I do.

3462. Will you state what occurred?—When the Customs found that there were a great number of cattle coming from Revel, they ordered both of us to be there to examine those cattle, and we did examine them thoroughly, and I think that I never saw in my life beasts come up in a fresher state than they did.

3463. You had a special order from the Customs intimating that a certain cargo was coming from Revel, and directing you to pay special attention to it?—Yes; and both of the inspectors were there. The beasts went through each of our hands.

3464. Have you any objection to put in that order?—Not the slightest.*

3465. Were any of these animals sick?—They were not; they were on the passage six days. They were not all fat beasts, but they were in very fine condition; that is to say, fresh and healthy.

3466. Did you examine them first as they came over the gangway, and then did you examine them after they were tied up at the posts?—No. The other inspector examined them, I believe, first, and I examined them afterwards, as they came up the slope on landing. He was at the bottom of the slope and I was at the top.

3467. What time of day was it?—I forget, but I know that it was daylight; it was in the morning, I believe.

3468. Do you make merely a cursory examination of the animals, or do you stop them, and open their mouths?—We stop them, and we order the men who lead them up to open their mouths; not every one, but a great number.

3469. Did you examine these animals in that way?—Yes.

3470. You do not know what became of these animals?—No.

3471. (*Dr. Parkes.*) Was there any difference in any of the cattle which appeared to have come from a different part of the country?—No; they were all as fresh as possible.

3472. I think you said that there are a foreign cattle market and a home cattle market at Hull?—Yes.

3473. Has any objection ever been raised to that course of separating the two?—No, I believe not. A new market was formed, and the corporation of Hull thought that it would be better to separate the foreign from the English cattle.

3474. When was that done?—About 12 months ago; they are all in the same ground, but are separated by a wall.

3475. The dealers have never raised an objection to that practice?—Not the slightest.

3476. (*Mr. Read.*) Is it usual for you to receive orders from the Custom House authorities with regard to particular cargoes?—No.

3477. Why was this order issued?—I do not know, except it was because of the quantity; we have not had such a quantity for a long time. I know that it was a very large cargo; and that is the reason why Mr. Pretty, our surveyor, said that we had better both of us be down.

3478. How long are you inspecting these foreign cargoes?—Sometimes four or five hours.

3479. How long were you inspecting this Revel cargo?—I think about three and a half hours, as nearly as possible. It was a cattle boat, and therefore they got off quicker than the ordinary boats in Hull. They generally hoist them by slips; but now they have a new way of forming gangways at the wharf, from one hold to the other.

3480. There were 321 cattle, and you say that you were about three and a half hours inspecting them?—Yes.

3481. That is pretty well two a minute. Could you mouth all these beasts in that time?—No; we do not mouth every beast that comes.

3482. You do not mouth any, do you?—Yes.

3483. Why?—If we are at all suspicious, and see any running of the eyes or a little extra breathing, or if the beast looks dull, we always have the mouth open.

3484. Of course you are well acquainted with the cattle trade. What do you suppose to have been the value of these cattle, as you say they were such good ones?—On the average, I should think about 12*l.* from Revel.

3485. Were they very small?—No; they were all good sized beasts; some were better than others.

3486. They could not be in a very good condition to be worth only 12*l.* each?—Yes; they were in very nice condition; they had been watered and well fed on the passage. That boat was expressly chartered for those cattle.

3487. If you had express orders from the Custom House authorities to take special care in the inspection of these cattle, why did you not tie them up, and look at them as you do now?—We thought that having two of us we could certainly detect anything amiss by both being on duty instead of only one; if only one of us had been on duty that one would, perhaps, have tied them up.

3488. What did you do with the sheep?—They were turned on their backs.

3489. All of them?—Perhaps not all, but say two out of three.†

3490. How many sheep were there?—I cannot say.

3491. Were there not something like 300?—I do not know that there were so many.

3492. The inspection of the cattle and sheep lasted about three and a half hours?—Yes.

3493. And you turned every two out of three sheep on their backs?—Yes.

3494. Am I to understand you to say that the whole inspection of these 600 animals lasted only three and a half hours?—Yes. There were two of us doing it; it would have lasted longer if there had been only a single inspector.

3495. Several of the cattle were mouthed?—Yes.

3496. And the majority of the sheep were turned on their backs?—Yes.

3497. Did you observe that there was one sheep which could not walk?—Yes; or two.

3498. What was the matter with them?—They seemed to have been lain upon and half suffocated.

3499. Do you think from that inspection that you would have been able to detect any disease?—I certainly say not.

3500. (*Mr. M'Clean.*) From the return which you have delivered in it appears that during the quarter upwards of 16,000 head of cattle were imported into Hull, and that 9 were destroyed?—Yes.

3501. Why were those nine destroyed?—Because they were found dead.

3501. And not from any plague?—No; not from any infectious disease.

3503. Have you seen the plague in any foreign cattle?—I have not.

3504. (*Mr. Read.*) Have you seen it in any English cattle?—No. We are quite clear where I come from; we have not a single case in Hull. I am inspector for about 20 or 30 miles. I have been called to see two or three cases, but they have been cases of pleuro-pneumonia.

3505. (*Chairman.*) Did you enter into conversation with Mr. Burchell who was on board the "Tonning" when she arrived?—No.

3506. Did you see him?—I saw a party who ordered different people about; and at last he was ordered off the ship altogether, by Mr. Twidell, the shipping clerk of the firm of Brownlow and Lumsden.

3507. Who received the cattle when they were landed?—Messrs. Brownlow and Lumsden. It appears that there had been a quarrel between the

* The witness subsequently stated that "no special order" with regard to the "Tonning" had been issued from the Customs, as the two inspectors were in attendance on similar cargoes both before and after the arrival of that vessel.

† This was subsequently altered to "two out of five."

party who went out to buy the cattle and the party who paid the money.

3508. Then Mr. Burchell had nothing to do with them when they were landed?—He was ordered off the ship. The owner of the cattle came to say to the shipping clerk that he had discharged him from his service, and that he had nothing to do with the cattle.

3509. Do you know who was that owner?—I do not remember.

3510. (*Dr. Playfair.*) Was Burchell's discharge immediately upon the cattle arriving?—Yes; he came down on purpose to discharge this man, and he discharged him; at least the shipping clerk told him to leave the ship altogether.

3511. Then he was not there during the three hours that you were examining the cattle?—He was looking about on the pier.

3512. Do you think that he must have seen you?—Yes; he must have done so, because we handled every beast, but we did not open the mouth of every one.

3513. Would you be surprized if he had stated in evidence that he saw no inspectors whatever looking upon the cattle?—I have heard that in the Custom House. We have letters from different parties in the Custom House. There were two of us; one at the bottom of the gangway and one at the top, and every beast that passed was got hold of, first by one of us and then by the other. In the first place, if we are not there the Custom House officers will not allow cattle to be landed. If we should be called away for any time, they would stop the cattle.

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3514. Did you ask what had been the health of the cattle on board?—Yes.

3515. And what was the reply?—That they had been very healthy.

3516. Did you find that one had been sick during the passage?—No.

3517. Whom did you ask?—I asked nobody; I heard it in conversation; I heard Mr. Twidell, the shipping clerk, ask them how the cattle had been, and they said that nothing could have been better.

3518. (*Mr. Read.*) And if there had been one ill it would have been no uncommon occurrence?—No; a great number are often ill, especially when they are brought out of the hold.

3519. (*Chairman.*) Who had charge of the cattle on board?—Nobody; excepting that this man had charge previously to his getting to Hull, and then the owner of the cattle came down, and told the shipping clerk to Messrs. Brownlow and Lumsden that he must not allow this man to do anything with the beasts, as he had turned him off; and Mr. Twidell, the shipping clerk, turned him off on board.

3520. Did you see this man who you believed to be the owner of the cattle?—No; but I saw his man.

3521. You do not know the name of his man?—No.

The witness withdrew.

Mr. William Shipley examined.

Mr. W. Shipley.

3522. (*Mr. Read.*) Are you inspector of the imports of cattle at Lowestoft?—Yes; I have inspected them lately; within the last three years.

3523. How much do you receive per cargo for inspecting cattle, or how are you paid?—I cannot exactly tell you, because I am nine miles from Lowestoft, and it entirely depends upon the time that I have been detained there. We have no ships in there now, excepting they come in under bad weather, and so on; and we have had some long cases. I think that we had 608 beasts, and 300 of them died, so that it made several days' work.

3524. When was that?—In 1863. I am hardly called in, except under similar circumstances to that, because the beasts generally go on to Harwich.

3525. Is there any other inspector at Lowestoft besides yourself?—No.

3526. You say that the import trade of Lowestoft is almost annihilated from some cause or another?—It is.

3527. Why?—I cannot tell why. I have a list of what I have had. In 1863, there were the "City of Norwich" and the "Tonning" with 608 beasts and 800 sheep. There were 300 beasts dead or slaughtered, and 230 sheep dead or slaughtered. On November the 4th, there was the "Roland" from Hamburgh with 15 beasts and 12 horses. There were 10 bullocks and eight horses dead. On the 2d of December the "Norfolk" put in in bad weather, with 80 cows, 90 calves, and 170 sheep. In 1864 there were three small Dutch vessels which put in with 72 beasts. In 1865 there were 20 beasts in Lowestoft. Those are all the beasts that I have ever inspected.

3528. What is the date of the last import?—January the 1st.

3529. A great number of sheep and cattle appear to have died; did they die from disease, or were they killed?—They died from exhaustion consequent on the long voyage.

3530. They were injured by a tempestuous voyage?—Yes; they broke lose, and became smothered; they trampled on each other.

3531. Are you inspector of any district in Norfolk?—Yes; East and West Flegg, and Great Yarmouth.

3532. What has been the progress of the disease there lately?—The progress of the disease is much about the same, I think, as it has been for two months past.

3533. How many fresh cases have you had within the last fortnight?—On October the 1st I had a case, and seven animals were slaughtered. On the 6th I had two cases, and they have recovered. On the 12th I had a case which died. And on the 13th I had a case which was shot.

3534. Those are all in one neighbourhood?—Yes; within six or seven miles.

3535. Has the general health of the cattle which have been imported at Lowestoft been good or bad?—It has been very good. There has been no disease at all of any sort.

3536. With the exception of these sad accidents they have been imported in very good order as well as in good health?—Yes.

The witness withdrew.

Charles Stevenson, Esq. examined.

C. Stevenson, Esq.

3537. (*Chairman.*) I believe that you are the Editor of the North British Agriculturist newspaper?—Yes.

3538. Have you considered a good deal the subject of the Rinderpest in England?—I have.

3539. Do you consider that it is of a very serious nature, and likely to be a great calamity in the country?—I think it will be very difficult to get it subdued, and perhaps very difficult to get the country quit of it.

3540. Do you consider that the measures which have been already taken by the Government are sufficient to meet the evil?—In some degree they are, but I think that they have not been generally applied as regards

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Scotland, for there are almost no steps taken, no person having been fined for infringing the Orders in Council.

3541. What suggestions would you make towards putting an end to this disorder in Great Britain ?—I would suggest that an order might be framed of which the provisions should perhaps be not so very stringent as the present orders, and that the magistrates might have the power of taking further measures under a new Order in Council.

3542. Do you consider that the inspectors now have too large powers of slaughtering animals ?—Yes; I decidedly object to slaughtering any animal except for the purpose of making use of the carcase for food, unless the owner wishes it to be slaughtered. I consider the meat perfectly wholesome in almost any case of Rinderpest.

3543. Have you formed any opinion on the recent Order in Council which enables magistrates in petty sessions or the magistrates of boroughs to forbid all fairs and markets ?—Yes ; I have looked carefully at it, for the magistrates in Edinburgh have had some difficulty as regards a market held beyond their boundaries, what is called Hallow Fair. They have taken the opinion of counsel upon the subject to ascertain their powers of stopping that market.

3544. Do you consider it a desirable measure generally that fairs and markets should be stopped throughout England and Scotland ?—All store markets, decidedly ; and I maintain that all lean cattle taken to a fat-cattle market should not be allowed to leave the market, or that a circle should be prescribed by the magistrates so that from any parks or lairs near a town the animals should not be removed, and that they should be slaughtered within at least ten days from being taken to the market.

3545. You would allow the animals to remain alive for ten days within a certain district permitted for that purpose ?—Yes, and sheep also ; I likewise consider that sheep and pigs should come in the same category.

3546. What proof would you require to show that these animals had been slaughtered within the 10 days, and had not been removed into various parts of the country ?—The slaughter-house returns might show that. In the event of those persons infringing the order they are liable to be fined.

3547. Do you believe that it would be possible, under such circumstances, to allow the existence of of private slaughter-houses ? —I am decidedly against private slaughter-houses. I have been through several in Smithfield some years ago ; and such scenes I never witnessed, or could suppose to have been committed in any civilized nation ; cattle were standing side by side, and men were busy in slaughtering them ; there were something like perhaps 100 cattle in one of these places on the evening I refer to.

3548. With a view to get those orders properly carried out, would it be possible to allow private slaughter-houses to continue ?—In the country districts I do not see that these can be prevented. In a small town a flesher has a place of his own, and I do not see that you can interfere, where there is no public slaughter-house.

3549. (*Mr. Read.*) A flesher is a butcher ?—Yes.

3550. (*Chairman.*) Then your view is that all lean markets should be stopped, but that under certain retrictions fat markets should be allowed ?—Certainly.

3551. Your remark would apply to foreign cattle as well as to home cattle ?—Yes.

3552. There have been various suggestions made by witnesses to the Commission. Without giving an opinion upon them, I will ask you what you think of them. A suggestion has been given to the effect that it would be desirable to stop all movement of cattle in Great Britain altogether, and that animals should be slaughtered at the place where they are reared or grazed. Do you believe that that would be possible ?—I do not think that it would be possible without creating a very great amount of dissatisfaction, which would bring such a pressure to bear upon the Government that they would be obliged to rescind the order.

3553. Is there great deal of trade now in dead meat from Scotland to England ?—A very great deal, generally in the winter months. I have not the statistics of it from Edinburgh and Aberdeen as I expected, but it is very large.

3554. Do you consider that that trade could be developed with advantage ?—With very great advantage to consumers as much as to feeders.

3555. Can you state shortly your reasons for that opinion ?—During the cool season the meat arrives in London in better condition than if the beast had been slaughtered in London. The fleshers find that it frequently brings a higher return to send up the best portions, and to dispose of the offal in Aberdeen or Edinburgh. All the best parts of the carcase are sent to London, where they realize a higher price, and the consignees receive more money, than they would do by selling the carcase and the offal in Edinburgh or in Aberdeen.

3556. Do you think that there would be difficulties in extending that system to all parts of the kingdom ?—There is this difficulty, that meat arriving in Edinburgh or in Glasgow in a basket is usually considered to be the carcase of an animal which has been slaughtered to prevent its dying, and it is looked upon with great suspicion ; whereas in London so much of this trade is carried on that carcases coming direct from Scotland sometimes sell in the west end of London at higher prices than if the beasts were killed in London.

3557. But that is a prejudice which would be easily destroyed if they were obliged to adopt that course ?—In time I believe it would, but not for some time. If you will allow me, I will call you attention to one thing upon which the magistrates of Edinburgh feel a difficulty, namely, private sales. I hold that all these weekly, fortnightly, and monthly sales of stock, whether lean or fat, should be prevented, and also public sales of stock, which may be made known by advertisement or otherwise, such as sending circulars. I think that you might permit the sale of any stock which has been upon a farm for two or three months, provided that the disease has not shown itself upon the farm for a certain period, say two months.

3558. Do you think that the private sales are a means of disseminating the disorder as much as the public sales ?—I am certain that they have done so. I may mention that Mr. M'Combie of Tillyfour, a great feeder, has taken a very active part with a view to stop these sales. Recently, I believe, he has applied for an Order to the Privy Council to get such powers for the county of Aberdeen. He is chairman of the Cattle Disease Committee. Parties purchase lean or fat cattle, and send them to a sale. The moment they are knocked down to a purchaser, all responsibility appears to end, and the cow or ox is carried off to Glasgow, if the sale is in Edinburgh, or to some other market, and is there again disposed of.

3559. And as it is rather an object for a man when he has a diseased animal to sell it as rapidly as possible, such sales very often are those of diseased animals ?—Yes ; and he avoids the responsibility to a certain extent ; at least he believes so. He does not meet the purchaser; the agent is not responsible, nor any person who sends an animal to these sales. They are responsible of course under the Order in Council, but that has never been acted upon in Scotland. I want the Order in Council to be more explicit, so that the magistrates of Edinburgh or the magistrates of the county of Aberdeen, or any person who wants to put it in force, shall have the power of doing so, in order to prohibit all weekly or monthly sales.

3560. Do you consider that no remedy short of stopping markets, such as you describe, would effec-

tually stop the disorder in Great Britain?—I believe not. I may mention that in a letter from Mr. M'Combie he states that the disease was introduced into the county of Aberdeen by calves from London, and in four different places, and that at an expense of about 2,000*l.* they have slaughtered all the diseased animals, and he says that there has been no case of any outbreak for the last eight or ten days.

3561. Would you therefore be in favour of a system of slaughtering generally?—No. I decidedly object to slaughtering, except the owner wishes the animal slaughtered; and I think that the carcase should, if possible, be made use of for food.

3562. Do you think that the Government should take some strong sanitary police measures all over the country in order to stop all markets?—No. I would give the magistrates of a county or of a district that power. I would not give the Government the power over Great Britain and Ireland to stop all markets. I would make the local authorities responsible for such a step, which would be very unpopnlar in many districts.

3563. Does it not often happen that when one fair is stopped another in the neighbourhood goes on, and that the one which goes on will do more mischief than if the two were going on together?—That is very possible; but still, my object is that the local authorities should be made responsible, or be the responsible parties for any steps taken. An Order in Council might recommend such a step to be taken.

3564. But you would wish to see it universally adopted throughout the country?—Clearly in all cases where there is any disease.

3565. (*Mr. Read.*) You say that the Orders in Council in Scotland are not obeyed?—They are not carried out; they are not acted upon generally.

3566. Who should be the prosecutor when these orders are not observed?—The Procurator Fiscal; what we call the public prosecutor in Scotland.

3567. You have public prosecutors in Scotland, and yet the orders are not obeyed?—Certainly not.

3568. Then you do not think that the public prosecutors have done their duty?—I do not think that attention has been sufficiently called to the matter to see the orders carried out effectually. The country is not yet sufficiently alarmed, particularly as to the danger from the disease spreading.

3569. How long would you suspend the store markets and fairs in the kingdom?—I think that there were would be no harm in doing it till the 1st of March; very few are held in the winter; and before that time Parliament would have met.

3570. I suppose that in the case of all stock which went to a market to be slaughtered you would make it penal for any railway company, or any person or persons, to remove such stock beyond the limits of the town?—Clearly. I would apply that to the owner and the railway company and the servants; every person who has aided and abetted in the movement.

3571. How would you regulate the transit of store stock, provided you abolished all fairs and markets?—People might know by advertisement or by other means that cattle are for sale, and it would be well to have an inspection authorizing the removal of stock.

3572. Then you would not prohibit the transfer of store stock from one farm to another?—Certainly not.

3573. Do you believe it would be possible in this prohibited period to require that in the case of all stock which should be moved, a certificate should be produced from some competent authority to say that they were in a healthy state?—Or that there should be a certificate from a magistrate in the district that there is no disease, and that these cattle may be moved.

3574. You fancy that the local authority can better carry out these suggestions than the Imperial Government?—Yes, I think so.

3575. Would there not be diverse regulations?—It is so, and it will be so; but I think that the pressure which would be brought to bear upon the Government would be so great that they would be obliged to rescind the order generally; and it is better to make it such that the local authorities are responsible for its action.

3576. So long as these measures are employed I suppose you do not particularly care who makes them?—No, I do not; but still I want to make the magistrate residing in a district the responsible party for enforcing the law.

3577. You think that if they made the provisions they would be more likely to see that they were carried out?—Probably they would; but public meetings would be got up immediately, stating the hardship of the requirements. When Parliament meets, I have no doubt that there will be many long speeches upon the subject.

3578. (*Mr. M'Clean.*) Do you propose to close the Metropolitan Cattle Market?—No; except that no stock is to be removed.

3579. When there is an excess of stock, sometimes amounting to one half, would you slaughter the whole of those animals, and prevent their being distributed over the country?—I would wish that within 10 days all animals brought to a market should be slaughtered, so that there shall be an opportunity of their being offered twice in the same market.

3580. You would require these beasts to be slaughtered in London?—If they are brought to London they must be slaughtered in London; if they are brought to Edinburgh they must be slaughtered within the bounds.

3581. Do you not think that that would interfere very much with the distribution of food throughout the country?—I do not suppose that it would make any difference at all in the distribution of food. I may mention that in a case near Edinburgh a farmer took a number of cattle to Edinburgh about a month ago. He was not offered what he supposed their value. He took them home, and within 10 days the greater portion were dead, or were ill, or had to be slaughtered.

3582. (*Dr. Playfair.*) I think you have said that the local authorities have not vigorously carried out the measures in Scotland?—No, decidedly not.

3583. And yet you would intrust the vigorous prosecution of new measures to the same local authorities?—In this way, that I think that if they were called upon to consider this Order in Council they would then feel their responsibility more.

3584. Are you of opinion that local authorities would face the unpopularity of such measures more than the Imperial Government?—They would not face it, perhaps, so boldly; but what I want to guard against is this, that a pressure is brought to bear upon the Government, and after the Order in Council is issued the Government is perhaps obliged to rescind it.

3585. Are you of opinion that this is an imported disease?—No; I am not at all satisfied that it is an imported disease.

3586. But you are satisfied that one diseased animal introduced into a district may produce much mischief?—Yes. I may mention that shortly after the disease appeared in Edinburgh I went with Professor Dick and Professor Strangeways, and examined the byres with them, and I saw the two Dutch cows which were said to have brought the disease to Edinburgh; but I afterwards learned that a cow dealer had purchased a number of cows in London, and had brought them to Edinburgh market, and that those cows were sold to five different cowkeepers in Edinburgh.

3587. Then you believe that these diseased animals introduced the disease into Edinburgh?—Yes.

3588. If certain authorities in England during the time of the importation of cattle neglect their duties, and leave diseased beasts in their districts, how much better will you be when the prohibition comes to a natural end?—Apparently no better.

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3589. Then do you not think that something more is wanted than the separate action of a local authority to extirpate this disease from the country, and that it must be done by a general measure?—Perhaps it may be so, but I see a difficulty in the Government undertaking the responsibility.

3590. You have said that you think that store cattle may be removed under a bill of health?—Yes.

3591. Would it not be dangerous that they should pass along the high road where possibly diseased cattle had been sent for slaughter?—Yes; but I think that diseased cattle should only be removed in vans, and that no diseased animal should be allowed to travel on a public road or on a railway if known to be diseased.

3592. But you are aware that it is very difficult to know the first stages of the disease, and that even inspectors are unable to determine it.—Yes; but I believe that it is developed much sooner than veterinary surgeons are aware of.

3593. Do you believe that if there were a possibility of store cattle throughout the country coming in contact with the seeds of the disease sown by diseased animals you would have any chance of stopping the disease in the country?—I think that the purchasers of the stock would take very good care how they brought stock to a farm, because the disease generally clears off every animal upon it. I have known one case in East Lothian where eleven animals were bought in the Edinburgh Market, and taken home, and within a month or five weeks the oxen and cows upon the farm either were slaughtered or died.

3594. Would not the same roads be used for driving the fat cattle to market and for driving the store cattle of the same district from one farm to another?—Yes; but generally people move fat cattle as soon as possible to a railway station.

3595. But if they had to cross over the same road, is there any chance of extirpating the disease from the country?—I think that there will be no great harm in a day or two, and that if rain falls the danger may pass.

3596. But you may have dry weather also: Are you not aware that the diseased matter deposited has been known in a dry state to last for months?—No; I was not aware of it.

3597. (*Chairman.*) Is there any thing else which you consider important for the Commission to be informed of?—I have already referred to foreign cattle, that they should be kept in quarantine until they are removed to a station to be conveyed to market. I think that they should not be put upon any parks or in sheds, except such as have places set apart on purpose for them. I think that they should be put on to a railway, and sent on to market, and be subject to the same rules as British cattle. I may mention that I find great complaint with the railway companies, on account of the state of their trucks.

3598. (*Mr. Read.*) Would you especially refer to a railway which you know?—I have seen dirty trucks at the Edinburgh station, and I have called the attention of Professor Dick and Professor Strangeways to them, and I have directed the attention of the magistrates of Edinburgh to the matter. They have some doubts of their power to interfere.

3599. (*Viscount Cranborne.*) To which Edinburgh station do you allude?—The North British station.

3600. What do you mean by dirty trucks; merely looking dirty, or obviously containing infected matter?—Containing the droppings of cattle and sheep; and they were putting in foreign cattle at that very time while Professor Dick and Professor Strangeways were inspecting before sending them to the Newcastle market, and when I was with them. There were nearly 100 cattle.

3601. (*Chairman.*) Was that since the outbreak of the Rinderpest in the country?—Within these two months.

3602. (*Dr. Playfair.*) Are the dairies of Edinburgh in a proper and healthy state?—They are not places that any one who has a respect for short-horned cattle would keep them in, as a rule; but some of them are pretty good. I consider that all dairies should be beyond the municipal boundaries, and that there should be no dairies within cities.

3603. Have you any licences for dairies in Edinburgh?—There is no licence that I know of, the same as in London. I may further mention, that I think that the carcases of cattle which die of the disease should, if possible, be sent to a manure manufactory, rather than be buried, because there is some danger of their being taken up again, and either salted or used as food. I may mention the case of Mr. Hope, of Fenton Burns, who had two animals which died of pleuro-pneumonia, three or four years ago, and he buried them. He had some Irishmen cutting drains upon his farm; they took up the carcases in the night-time, and salted them, and Mr. Hope thought that they cut the drains all the better through the winter, from having had this diseased meat to eat.

3604. (*Viscount Cranborne.*) Have you any experience with respect to the healthiness or unhealthiness of diseased meat for human food?—Not beyond the case of the shepherds; the shepherds generally eat the meat of any sheep which die of disease; they generally cure the quarters of mutton for their own families, and as a rule a shepherd's family who have a little animal food are much better than the family of the hinds who have little animal food.

3605. You have no special experience of the Rinderpest?—No; except that I have seen soldiers who were out in the Crimea, and also at the occupation of Paris, and they said that they were glad to eat meat of any kind, whether diseased or not. I would wish particularly to impress upon the Commission the importance of having railway trucks cleaned immediately when cattle are taken out of them. The loading banks at Edinburgh are bad. I think that markets, such as the Edinburgh market and the London market, should be immediately disinfected by hot lime, or something of that kind, being spread over them the moment the market is over, and that the place should be cleaned up, to prevent any spread of infection.

The witness withdrew.

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Mr. Owen Wallis, Mr. Charles Hill Watts, Mr. George Osborn, and Mr. William Shaw examined.

3606. (*Chairman.*) (*To Mr. Wallis.*) You are chairman of the Northamptonshire Cattle Insurance Association?—Yes.

3607. And you hold a considerable farm in Northamptonshire?—Yes; I have two farms.

3608. You are a member of the Council of the Royal Agricultural Association?—Yes; and of the Council of the Smithfield Club.

3609. (*To Mr. Watts.*) You have a large farm in Northamptonshire?—Yes

3610. Are you a member of the Royal Agricultural Association?—No.

3611. (*To Mr. Osborn.*) Are you a member of the Royal Agricultural Association?—Yes; I am a life member of it.

3612. (*To Mr. Shaw.*) Are you the holder of a considerable farm in Northamptonshire?—Yes.

3613. (*To Mr. Wallis.*) Have you considered the subject of the Rinderpest?—Yes; I have paid a good deal of attention to it.

3614. Has there been much of it in Northamptonshire?—Yes; a good deal in different parishes.

3615. Can you trace the origin of it?—In all cases excepting one, it has been traced to cattle purchased at the Northampton Market. I think I may safely say that.

3616. Has it been traced from the Northampton Market to the Metropolitan Market?—Yes; from cattle originally purchased in the Metropolitan Market, and brought to the Northampton Market.

3617. Do you consider that the present regulations regarding the outbreak are sufficient to prevent its spreading?—I think not.

3618. Will you point out in what way you do not consider them sufficient?—I think that there are even now such great facilities for the transport of diseased cattle about the country that infection is traceable to that cause; the disease may not be perfectly developed, but it is in an incipient form, although at the same time in a form which may convey infection.

3619. It is so difficult to detect the first symptoms of the disease, that inspection, however good, is sometimes unable to prevent diseased cattle travelling about the country?—I think so.

3620. Have you considered the subject of stopping the markets and fairs throughout the country?—Yes; and I think that it is the only available means of stopping the spread of the disease.

3621. Has the practice been universally followed in the country of stopping the fairs and markets?—No; I think only very partially indeed, and in no one neighbourhood altogether, so far as I understand.

3622. If the measure is carried out, you consider it important that it should be done generally throughout the country?—Yes; and simultaneously.

3623. There are, I suppose, two kinds of markets, the store market, and the market for fat cattle; would your remark apply to both?—I think that under certain regulations perhaps the traffic in fat stock might be continued, but I think that it must be under very strict regulations.

3624. Have you formed any opinion as to how that could be conducted?—I think that perhaps by a licence, or a certificate from a veterinary inspector, certifying that certain beasts were free from disease, and had not been subject to the influence of contagion, they might be sent to market to be sold for slaughtering, but that they ought never to return again from that market back to farms.

3625. Do you think that certificates of this kind are to be depended upon?—Perhaps that is a question; it might be open to objection; I am not quite sure upon that point.

3626. Supposing that your suggestions were carried out, and that animals were not allowed to leave a market town alive, how would the slaughtering of these animals take place?—If they were not purchased by butchers for slaughtering on their own account, they must be slaughtered, I imagine, on the owner's account, and sold as slaughtered animals, or else put into some place until another market day, away from all other cattle.

3627. Would there be accommodation in country towns for slaughtering of that description?—I think so for slaughtering; I am rather more doubtful as to places for the animals being kept alive; but I have no doubt that they might be slaughtered.

3628. Some of the witnesses whom we have had before us have suggested the stopping of all movement of cattle, and that cattle should be slaughtered on the farms where they are grazed or reared; do you consider that that would be possible?—In many cases, even for slaughtering, they must be driven some distance. I can cite my own case as an instance. I have some fields a mile or a mile and a half away from any village, or any possible house where the animals could be killed, except in the fields; I have no possibility of dressing them.

3629. You could not make arrangements for killing them on your farm?—Not upon my grass farm. Of course I could upon my arable farm; but the other is wholly a grass farm, and I have only one little shed, but that is quite away from the fat portion of my cattle.

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3630. With regard to putting a stop to the store markets, are there not now private markets held in different parts of the country?—Yes, undoubtedly there are; and the stopping of the cattle markets would be abortive unless the whole of that description of cattle were prohibited from removal at all.

3631. What has occurred in that respect in Northamptonshire?—Droves have been placed for sale on pastures belonging to inns in the villages, and they have been met there, and purchased there, and if not purchased there they have been driven on to other places of the kind.

3632. And there has been a danger of purchasing diseased animals, or animals which have been in contact with diseased animals?—Yes; I think quite as much as if they had been driven into a market.

3633. Would very great inconvenience occur to the farmers in your neighbourhood if all movement of store cattle were stopped?—There is no doubt that great inconvenience would arise, but I think that it is one of those things which will have to be submitted to before the disease is eradicated.

3634. You would rather submit to that than have the danger of these fairs going on?—I would, individually, certainly.

3635. (*Mr. M'Clean.*) Do you think that it would be possible to regulate the supply of London animal food if none of the beasts at the market here were allowed to leave?—There would no doubt be some difficulty in the first instance, but I should think that it would be one of those things which would be ultimately brought about; it, of course, would be attended with a good deal of difficulty.

3636. How is it to be regulated?—I imagine only by sending the slaughtered animals to the dead market.

3637. (*Mr. Read.*) Do you think that there would be any practical difficulty, in the cold weather during the next three months, in slaughtering the live cattle in London, and sending them to any part of the kingdom?—No; I do not see why there should be any difficulty in it. I believe that carcases are constantly sent from Scotland to the London markets all through the winter months, and I do not see why the same thing should not take place from London to any part of the provinces.

3638. Would you tolerate all fat markets?—I think that you must tolerate all, if you tolerate one.

3639. We will take the cases of London and Norwich. London supplying a large population, and Norwich being a market where every butcher could supply himself from a farm with all the fat stock that he wanted?—Yes; there is a difference between the two cases, undoubtedly.

3640. Whereas the stoppage of the London market would be next to impossible, the Norwich market might be advantageously closed?—Yes; that is possible.

3641. You have said that you would prohibit the entire transit of all store cattle?—Yes; I would, certainly.

3642. Would it not be a very great hardship to those farmers who have a lot of turnips to consume, and have no cattle (take the case of the eastern counties), that they should not be allowed to stock their farms for the next three months?—As I have said before, great losses and great difficulties would be experienced; but it is the choice of two evils, whether you will go on with the disease, or whether you will check it in its present form.

3643. Would there be more risk of spreading the plague, if, for instance, I went to your pastures, and bought 20 bullocks, and took them into Norfolk, than by fat bullocks being sent to London?—I should only send to London beasts perfectly fat and fit to be killed, and in the other case you would buy beasts in a half fat state, and have to keep them for feeding.

3644. Do you think that they would be very much

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endangered by the transit?—I think that they would.

3645. Then you would prohibit all dealing between one farmer and another?—I do not know how you are to make a partial dealing; you must either restrict it altogether, or permit it, and if you permit it I do not know how you are to check the disease.

3646. Would it not be possible to make it penal for any person to congregate, or exhibit for public or private sale, any stock on any public or private property, and to stop these private fairs which are being held, so that you might stop all traffic, and all trade in store stock, except from one farm to another?—I do not see what the distinction is between the two cases, whether you buy directly from a farmer, or through the agency of a third person.

3647. I suggest that the cattle should go straight from one farm to another, and should on no account be exhibited for sale or congregated in any public place?—I see a distinction in that case; but then there is a liability of infection by the transit; that is the difficulty which I see in the matter. There is another point upon which I would remark, namely, that I think that it is useless to expect to prohibit the sale of cattle simply by a fine of 20*l.* for the non-observance of the Order in Council, inasmuch as if a man has a considerable number of beasts which have been liable to infection he would lose a great deal less by paying the 20*l.* fine than he would gain by the sale of his stock, supposing that he sold them at something like their value.

3648. You think that in the eastern counties we should be totally destitute of stock for the next three months, rather than run the risk of extending the plague?—I am not sure whether three months will be required.

3649. We will say two months?—Yes.

3650. You think that we had better be without them?—I think that you had better be without them than run the risk of receiving diseased animals, and perpetuating the disease.

3651. (*Viscount Cranborne.*) Can you form any estimate for your own county of the amount of loss which it would be to the farmers; is yours a grazing country?—Yes; it is mixed; it is perhaps chiefly grazing; but it is also mixed, namely, arable and pasture land; a good deal of stall feeding goes on as well as summer feeding.

3652. Can you give any estimate, however rough, of the amount of loss which would be occasioned from the farmers being forbidden to buy cattle for fattening?—I could not possibly give any approximate amount.

3653. Would there be any difficulty in enforcing the slaughter of all animals which were brought to fat markets?—I think not; I think that the demand would pretty soon be found out, and that the supply would soon regulate itself pretty well to the demand.

3654. Could you trust the butchers to take away the cattle to their own slaughter-houses to kill?—I think so; there might be cases where they might be sold again after being purchased.

3655. Would it be safe to insist that they should all be slaughtered directly after the market? Is it not commonly the practice to keep the beasts 24 hours in order that they may be in a fit condition for slaughter?—Yes; I suppose that all butchers fast them for a certain period after purchase, but I suppose that the cattle which would be slaughtered on account of the owners would be subject to the same process of fasting.

3656. During that period there would be considerable facilities for getting them away if any people were dishonestly disposed?—I suppose that there might be. I do not know how that could very well be checked.

3657. Do you think that it would be wise to have fields attached to the town, under the supervision of local authorities, where the animals should be kept during the time which should intervene before their slaughter?—I do not know; all the butchers who slaughter them on their own account take them directly to their own premises, and fast them, and kill them perhaps on the following day.

3658. If you had no such fields under the supervision of the local authorities, it would be necessary to take security from the butchers?—I should think that it would.

2659. At this season of the year would they take them into fields, or would they take them into sheds?—I think that they always take them into their own sheds.

3660. (*Dr. Parkes.*) You have a large market at Northampton, have you not?—Yes.

3661. What are the measures now taken there regarding the disinfecting of that market?—Until the last fortnight, excepting the ordinary sweeping and scavengering, which all the town undergoes, nothing was done. I suggested that they should use disinfectants, chloride of lime, and other things, upon that part of the market where the fat stock are exhibited, and I believe that they have done so. I also suggested that they should destroy the manure arising from the sweepings, because this manure ultimately going upon the farms might be a source of contagion at a future day.

3662. Do you think that those measures have been carried out to a proper extent?—I believe that they have. I understand that the town commissioners had taken measures of that kind.

3663. To prohibit the sale of manure, or to disinfect it?—I think to disinfect it.

3664. Have any instances come to your knowledge in which the disease has been propagated by means of manure?—No. I have not had an animal with the disease myself, nor have I seen any cases of it, and therefore I am not able to speak upon that point, but I think that it is a very probable source of contagion, and perhaps the most probable.

3665. (*Chairman.*) Is the place where cattle are exposed for sale at Northampton of such a character that it can be readily disinfected?—Not very readily, because they stand on a considerable space of ground, and I have understood that it would be an expensive process to disinfect the ground upon which they are placed.

3666. The cattle market extends to several streets, does it not?—I am speaking more particularly of the fat cattle market on the Market Hill, which comes under the province of the corporation; but the store fairs and markets extend over a very considerable area, comprising many streets, and very long streets.

3667. And it would be rather difficult to disinfect those streets effectually?—I think that it would be wholly impossible.

3668. Where are the fairs for lean stock held?—Excepting two months in the year, namely, July and October, I think that we have one every other month in the year. There are two fairs in November. There are about 12 fairs, I think, in the year, as far as I remember.

3669. You would not consider the place where store animals are sold in Northampton satisfactory for such a purpose?—No; I think that it is almost certain that if diseased cattle were taken into that market it would be a means of propagating and spreading the disease.

3670. More so than if they were sold in a more confined space, which could be disinfected and regulated?—I do not know that.

3671. (*Viscount Cranborne.*) I suppose that you would include private auctions in the prohibition, as well as fairs and markets?—You mean auctions on the premises where the cattle have been fed?

3672. Yes?—If they are to be purchased, I imagine that it does not matter whether they are purchased by public auction or by private contract, supposing that they are upon the ground where they are fed.

3673. But if they are sold for the purpose of being carried away and fattened, they should be prohibited just as much in private as in public sales?—I do not

see any distinction whether a farmer sells them himself or employs an auctioneer to sell them.

3674. (*Mr. Read.*) But you would not allow a farmer to sell his store stock at all?—Certainly not.

3675. (*Chairman.*) (*To Mr. Shaw.*) Do you agree generally in the views which Mr. Wallis has stated?—Not altogether.

3676. Will you state the points upon which you have formed a different opinion?—I think that that portion of his evidence with regard to store stock is not practical. I think that if cattle could be sold with a direct consignment from farmer to farmer, with a clean bill of health from an inspector, business might be carried on. You may as well have one loss as another, and I think that there would be less loss in one case than in the other. If you have a large turnip farm you will have a great loss arising from the non-consumption of the turnip crop, as well as the loss of crops for three or four years.

3677. But it is your opinion that the fairs for store stock are the means of spreading the disorder, is it not?—Most decidedly, and I should certainly wish them to be stopped as quickly as possible.

3678. Do you think that it would be better to do that, and to suffer some inconvenience from not being able to sell or buy stock?—Yes. I think that what has been suggested by Mr. Wallis would be a total interruption to business. No doubt his is the readiest way of stopping the disease. I, however, hardly see my way clear to the shutting up of all private bargains.

3679. Do you think that you could always depend upon certificates being given by one grazier to another?—I would make it very penal, and would inflict a penalty, 5*l.* per head, if you could show any violation of a confidential arrangement of that sort. I think that, even on Mr. Wallis's own farm, he must move his own stock; in ordinary occupation, in this country, they cannot be kept where they are.

3680. You think, then, that, however desirable this step might be, it could not be practically carried out?—I do.

3681. I suppose that the same remark would apply to the sale of fat stock?—No. I think that there is a great difference between the two cases. I think that you might enforce the immediate slaughter of all fat animals without any very great inconvenience, as the demand and supply would soon settle themselves. I would risk that.

3682. Would you allow a butcher at Birmingham to buy animals in the Metropolitan Market and take them alive to Birmingham?—No, certainly not; he should slaughter them in London or whereever they were bought.

3683. (*Viscount Cranborne.*) You do not think that there is any difficulty or risk with regard to killing meat in this weather?—No, certainly not; at any rate not for the next six months.

3684. Could a butcher lay up his meat for a week?—There is no occasion for it; there are daily, almost hourly, trains; there are almost daily markets; and I see no reason why quarters of beef should not go by train to market in preferenee to live animals, which not only suffer, but bruise and deteriorate by the journey.

3685. The butcher could not go up to market and bargain for the cattle himself?—No; there is no necessity for his going to market; he can have it all done by commission.

3686. Do you know what is the practice, whether butchers go up to the weekly market, or do it by commission?—In the hottest weather the butchers buy live animals, but in ordinary weather dead meat might be conveyed with safety. Practically we send dead meat to London, and do not receive it from London.

3687. We have had evidence that a great many animals are brought for the purpose of killing to the Metropolitan Market, and are carried off to Birmingham and other parts of the country, and killed there?—Yes; I believe that it is the case from Christmas to June; but at this time of year it is just the contrary.

3688. (*Chairman.*) The fact is, I suppose, that in the grazing counties the farmers buy to graze in summer, and that in the arable counties they buy to feed in winter?—Yes; practically so.

3689. (*Mr. Read.*) Do you think that if one farmer bought of another, and took care in the transmission of his stock, there would be any very great risk of his spreading the plague?—I do not think that there would, if he was careful of whom he bought his beasts. I think in our county, owing to the caution which is used, we have less of the disease than we had, and I also think if the disease had not been imported into the county from London we should have known very little of it.

3690. Of course you think that the principal danger is from the congregating stock together in markets and fairs?—Yes; and I think that a great deal of disease (I will not say this disease altogether) arises from the cruelty of men who call themselves jobbers. I will give you a case in point. I can prove that a lot of beasts were bought in Lincolnshire last year; they left the farmer's yard on Sunday; they stood in a fair there on the Monday; they travelled on to Harborough in the course of the night, and stood at Harborough; they came from Harborough to Northampton; the same night they walked from Northampton to Wolverton; then on to Banbury; they were not sold there, and they were brought back to Wolverton again. There were five clear days of exhaustion for the animals, and I think that it requires some law to stop such cruel acts. We shall never be free from disease while this is the case.

3691. You think that the treatment which cattle receive in their transit from one place to another engenders disease?—I do. In fact we are never free from disease.

3692. I have gathered from your previous answers that it is your opinion that it would be no great hardship to kill all the fat stock which are exhibited in certain markets within the towns in which those markets are held?—Yes; that is quite my opinion; I think that it is quite feasible.

3693. Especially in the weather which we may expect between this and Christmas?—Yes; in the next three months I am sure that you may do so.

3694. (*Mr. M'Clean.*) Would you allow cattle sold at the foreign cattle market at Hull to be distributed through the country?—I would, if slaughtered.

3695. Then all the animals, amounting to about 16,000 a quarter, must be slaughtered at Hull; what would you do with the offal?—I cannot say. I do not believe there would be that quantity if they were slaughtered on arrival, as we should only have fat things,—what the country requires, instead of the half fat, miserable things sent over now, which are only walking skeletons, and the very medium to carry disease all over the country, as they are worth nothing to the butcher.

3696. But you would require all the beasts which were imported and sold at the market to be slaughtered?—I would.

3697. The same remark would apply to Harwich and the places which supply London?—Yes; it could go to London dead; and the new Newgate Market is the proper place for it.

3698. Would not that put a stop in a great measure to the importation of foreign cattle?—No; not if they were fat. You might convey any amount of meat from one market to another.

3699. (*Chairman.*) (*To Mr. Watts.*) Have you anything to add to the evidence which has been given by Mr. Wallis and Mr. Shaw?—Nothing particular. I quite agree with Mr. Wallis, that I would stop the whole of the markets and fairs for store stock; but I hardly see my way clear as to how you are to do so with regard to fat stock. I would have all fat stock going to a market, if it was not sold there, killed; but I do not see how

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you can prevent country butchers buying in villages, and driving the animals a few miles to kill. There are a great many feast times now, and I do not think that a farmer would always have an opportunity of killing the animals at his place. I would decidedly prevent the removal of store stock entirely for a limited period. I think that three months would incur a great hardship on our people. I would say perhaps six weeks.

3700. Are the farmers in Northamptonshire now in want of store stock?—This is the time when we buy stock more largely than at any other, for keeping for the winter; but I think that, though it would be a hardship, we could put up with it for about six weeks; it would be a great hardship if it was for three months.

3701. (*To Mr. Osborn.*) Have you anything to add to what has been stated by the other gentlemen?—No; I agree with Mr. Wallis in his remarks.

3702. You have been rather a large loser?—Yes; I have had seven animals buried in one field which had the disease. They were bought at Northampton market on the 19th of August, and they first showed symptoms on the 7th of September, about 19 days afterwards; they were isolated on my farm. One bullock is getting well, and is going on well.

3703. (*Dr. Playfair.*) Were there no other diseased cattle in the neighbourhood?—Not near my farm.

3704. How near your farm were they?—I cannot say.

3705. Were they within one or two miles?—They were further, I should think; they were, I should think, within three miles, as far as I can tell; at least I did not hear of any nearer at that time.

3706. During that time did any of your people go to see the diseased beasts in the neighbourhood?—No.

3707. (*Mr. Read.*) Your are pretty sure that the disease was conveyed from Northampton market?—I have no doubt of it, because the veterinary surgeon who attended my beasts stated that he could trace all the beasts back to that one Saturday.

3708. Can you tell us whether there were previous outbreaks to yours from that Saturday?—Not that I am aware of.

3709. Yours was the first?—Yes; mine was the first case in the association. I bought six store beasts on the Market Hill at Northampton; winter beasts to be fed next summer.

Mr. Wallis.—The remaining portion of that lot of beasts went to the neighbourhood of Banbury, and died there.

Mr. Osborn.—I was very near buying ten more, and I understood that a few days after they were sold they went to the neighbourhood of Banbury, and died there.

3710. (*Dr. Parkes.*) Do you consider it quite impossible that those beasts were exposed to any other chance of infection?—I am quite certain my own were not, after I bought them, because I was very particular, and kept my closes free from all stock that adjoined the close where they lay.

3711. Were the beasts which went to Banbury sold on the same day?—No; they went upon the following Thursday to be sold.

3712. Were they attacked with the same disease as your beasts were attacked with?—I cannot say.

Mr. Wallis.—They ultimately died of it.

Mr. Osborne.—The first heifer which I had is getting well.

3713. (*Chairman.*) From your experience in Northamptonshire, are you of opinion that there is any cure for the disease by medicine?—I should say not.

3714. (*Mr. Read.*) Do you think that fat stock might be slaughtered in the town in which the market is held without any great inconvenience?—There would no doubt be some inconvenience attending it.

3715. I said, great inconvenience?—It would, I think, be a great inconvenience at Northampton.

3716. Why?—There is a great consumption at Northampton, and I do not know where the butchers could find places to slaughter the animals in, as there is a large quantity of meat consumed in the town that is slaughtered by butchers in the neighbouring villages.

3717. But what has that to do with killing at Northampton?—Many of them have not convenience for killing beasts, although they may have for sheep.

3718. Surely they would have the same convenience to buy the meat in Newgate Market then as now?—Yes. I cannot speak much about the Northampton meat markets, because it is out of my line altogether.

3719. (*Chairman.*) (*To Mr. Shaw.*) Do I rightly understand you, that the meat which is exposed for sale in the butchers' shops at Northampton generally comes from London, and is not from bullocks slaughtered at Northampton?—No; quite the contrary. The way that the butchers do with us, so far as I can gather, is this, they probably all of them buy more meat than they can vend in the country; they keep the rougher parts at home, and send all the best joints to London; that is how I conceive that the trade is carried on; it is a complete business with our butchers to send the best parts to London. When they have beef from London they have live beef, as a rule.

Mr. Wallis.—Undoubtedly.

3720. (*Mr. Read.*) (*To Mr. Shaw.*) Where are the fat cattle which are slaughtered in the Northampton market sent?—I should say about half is bought by the butchers and slaughtered; the other half is taken by the jobbers alive to London.

3721. (*Viscount Cranborne.*) And that you would stop for a time?—Yes; in order to get rid of this disease, as far as possible.

3722. (*Chairman.*) Is there anything to which you wish to call the attention of the Commission beyond what has been stated?—No; only that all fat beasts, no matter where they come from, should, after their first exposure for sale, be at once slaughtered.

3723. Have you any further remark to make?—I quite agree with Mr. Wallis that the penalty of 20*l.* is insufficient.

3724. (*Viscount Cranborne.*) You mean that it is too small?—Yes.

3725. (*Mr. Read.*) Perhaps you would prefer having it so much per head?—I would.

3726. Such as 5*l.* a head?—Yes.

3727. (*To Mr. Wallis.*) Have you heard of any cases of Cattle Plague affecting sheep in your district?—Not in our district, certainly.

The witnesses withdrew.

A deputation from the City of London was called in, consisting of the following gentlemen:

Right Hon. the Lord Mayor, S. Gibbins, Esq., Dr. J. W. Tripe, Dr. Aldis, S. K. Ellison, Esq., Dr. J. Whitmore and T. Sarvis, Esq.

The Right Hon. THE LORD MAYOR.
S. GIBBINS, Esq. (Chairman of the Markets Committee).
Dr. JOHN W. TRIPE (Medical Officer of Health for Hackney District).
DR. ALDIS (Medical Officer of Health for St. George's, Hanover Square).
SAMUEL K. ELLISON, Esq. (Medical Officer of Health for Poplar).
DR. J. WHITMORE (Medical Officer of Health for Marylebone).
THOMAS SARVIS, Esq. (Medical Officer of Health for Bethnal Green).

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3728. (*Chairman.*) (*To the Lord Mayor.*) The Commissioners will be glad to hear the views entertained by your Lordship and the other members of the deputation on the subject of this inquiry.

(*The Lord Mayor.*) I appear before the Commissioners as a member of this deputation, at the request of the committee, but I really have very little to say. I attended two or three meetings with Lord Granville at the Privy Council Office, and I then stated the views which I entertained.* I have seen nothing to induce me to alter the views which I then held, but, on the contrary, I think they are now confirmed. It appears that nothing has been done in the way of a curative process, and nothing is done but destroying everything that has come in contact with any diseased cattle. We find that they are being destroyed in very great numbers, and it is rather alarming. I think that medical skill or medical science ought to be brought to bear upon the matter, and that there ought to be places to which some of the diseased animals might be sent, and that a remedy might be found. I think it is possible that a remedy may be found, and that it would be a sad reflection on the medical men of this day if they should not find something as a remedy for this disease. There is another thing that I would mention: It appears that in some parts of the country they are now prohibiting the cattle from being carried from one place to another, except for the purpose of being slaughtered; that I think is a wise plan, but whether such a plan could be carried out in London I do not know, or whether those parties who have cows to sell, or any lean stock to sell, ought to be prevented from doing so. I suppose you may have seen in the papers a statement that some men made, who were summoned before me, that they were altogether ruined; one of them stated that he had left Wales with 136 bullocks; that he sold 12 of them on the road, and when he got to Barnet fair, some of the animals were infected with the disease, and all the rest, the 129, died, or were slaughtered. It appeared that another cattle dealer left Wales with 105; he was fortunate enough to sell 32 of them on the road; he brought the remaining 73 to Barnet Fair, nearly all of which died, and the others were slaughtered, and these men were put to the expense of burying them. Now whether those cattle brought the disease to the fair, or whether they caught the disease by grazing along the road, or the disease attacked the cattle before they got there, I cannot say; but it showed itself so soon, upon simply being taken to the fair, and the cattle died in the course of three days. I believe that Barnet Fair is held for three days. Mr. Gibbins has come furnished with some documents which, if not new, I think he would be justified in putting before the Commissioners.

Mr. Gibbins.—It will not be necessary for me to go again over the examination which took place last week. I will, therefore, confine myself simply to one or two observations, leaving it to the medical gentlemen, the officers of health for the metropolis, and who are members of the Cattle Plague Committee, to state their views to this Commission. I would, however, state that at a committee held at the Mansion House a few days ago it was thought before the Metropolitan Cattle Plague Committee dissolved entirely it would be advisable, and they thought it most desirable, that they might be permitted to wait upon this Commission. The Commission having granted their request, they are here to state their views on the subject. There were one or two questions put to me the other day which I will endeavour to answer now; but the general returns I will reserve for a future day, as they are not all quite made up. I will make them up, and send them to the Commission in a perfect form to-morrow or next day. On the former occasion I was asked particularly as to the date of my first knowledge of the disease in the market. I have now ascertained that it was, as I then stated, about the 26th of July, when we were informed of it by our own inspector; the first official letter that we received upon the subject was one dated the 2d of August; this was addressed to the Lord Mayor. He sent it to me, and, having already taken action in causing the market to be disinfected, &c., a special committee was called. Since then we have been constantly at work. I know that about the 26th of July they began to take action officially, and we knew of this on the 2d of August. With regard to the other questions, one of them was as to a return of the number of cow-sheds in the metropolis. That had best be ascertained by reference to Dr. Druitt or to Professor Simonds. Officially, as a committee, we have no cognizance of the sheds round the metropolis; but, by an application to Dr. Druitt or Professor Simonds, no doubt the information may be obtained. All the other returns I can make. Dr. Tripe, the medical officer of health for Hackney, will be glad to make a few observations upon two or three points.

3729. (*Chairman.*) (*To Dr. Tripe.*) Will you be good enough to state the colleges to which you belong?—I am a Doctor of Medicine, a Licentiate of the Royal College of Physicians, Edinburgh, a Member of the Royal College of Surgeons, and a Licentiate of the Apothecaries Society. There are two points to which I wish specially to refer in the observations I shall make upon this matter; the first is, that it is I believe the almost unanimous opinion of the medical profession, that treatment in this disease would avail. They consider that the system of killing is unscientific, and unworthy of the position which England has attained in civilization, and also that it is a bad system in a money point of view. I have been informed of several instances in which animals have recovered after having been condemned by an inspector. I believe treatment is most likely to be successful in the commencement of the attack. I may also state that I believe, by auscultation of the lungs, and careful examination of the animal, the disease may be detected in a very early stage. I may state that I have auscultated several cows, and found certain alterations in the breathing sounds in each, indicative of approaching congestion of the lungs, before the running from the nose or the eyes took place. The symptoms of Cattle Plague, like other diseases arising from blood poisoning, do not manifest themselves invariably in one particular way, but still there are certain symptoms which are sufficient; earlier symptoms,—I would say,—than those which have been pointed out in the Order in Council,—which might be used for the detection of the disease. I think, upon every ground, that a sanatorium should be established. I will now refer, if you will permit me, briefly, to the working of the present Order in Council, from which I think the Commissioners will see some of the difficulties of the case, and some of the modes by which the disease has been spread throughout the metropolis and England generally. They strongly point out the necessity for the establishment of one or more sanatoria, and that far less damage will be done in removing the cattle from the

Right Hon. the Lord Mayor, S. Gibbins, Esq. Dr. J. W. Tripe, Dr. Aldis, S. K. Ellison, Esq., Dr. J. Whitmore and T. Sarvis, Esq.

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sheds to the sanatoria than at present obtains in moving diseased or dead cattle to the knackers. The first Order in Council directed cowkeepers to give information to the Clerk of the Privy Council of the first appearance of the Cattle Plague in their sheds. But as the giving of this information might lead to the slaughter of all their stock, the cowkeepers, as a rule, at first neglected to give this information. In my opinion you could not expect that as men of business they would do it; and I do not hesitate to say that the Orders in Council have been and will be disobeyed, indeed as a matter of necessity they must be disobeyed, unless persons can see their way to some compensation. It was a knowledge of this fact, that people would not give the necessary information, that led the Mansion House committee to take up the matter of compensation. It was in the hope of gaining early information that they pressed this matter upon the public; but that scheme has failed. Still, with all due submission to the Government authorities, I cannot help saying that I think the Government will have to obtain a bill of indemnity, or else to pay the cowkeepers for the losses which they have sustained by the slaughtering of their cattle. I believe that there is nothing in the Act of Parliament which authorizes an order for the destruction of cattle. If that be so, and early slaughter is the best mode of stopping the disease, it seems to me that it would be much wiser to meet the matter at once, and to give a certain amount of compensation, for the purpose of obtaining early information. If the system of destruction is a correct one, the disease should have been stamped out at once. The first Order in Council, and all published since, throw upon the cowkeepers, under heavy penalties, the duty of giving information which might lead to their ruin. This, in my opinion, is not the best way to obtain early information; but that we should, instead, adopt a plan of shed-inspection carried out under a proper system, by which it could be early ascertained where the disease was, and so enable the inspectors to enforce such measures as might be deemed advisable. The Orders in Council have been oppressive to the cowkeepers in the extreme; nothing could have been more so; they were compelled at first to keep the diseased and the healthy animals together, unless they consented to their slaughter. At first the inspectors allowed the removal of cattle from the infected sheds; and I know of one instance in which, before the issuing of the second Order in Council, between 50 and 60 cattle were removed from one shed to the Metropolitan Cattle Market. At that time there were in the shed three cows frightfully diseased, all of which, I believe, died; two others subsequently took the disease. I visited the shed on a Friday; on Monday the shed was cleared out, with the exception of five. Fifty or sixty cows which had been exposed to the disease for several days were taken to the Metropolitan Cattle Market, and thence distributed throughout the country.

3730. Can you state the date of that occurrence?—Yes, by referring I could, but the Government cattle inspector for Stoke Newington could give the date when he visited the shed.

3731. (*Mr. Read.*) Was it before the 2d of August?—It was before the second Order in Council became known. The Order in Council appeared on a Friday, and it was published in the papers on Saturday. I visited the shed on Friday, the day on which the second Order in Council appeared, and the inspector visited the shed on the Saturday. The cattle were removed to the market on the Monday. I think it was in the first week in August.

Mr. Gibbins.—I think it was about the 10th of August.

Dr. Tripe.—I may state that this system has prevailed, and is still prevailing to an extent which this Commission is not at all aware of, and the plan of poleaxing, or compelling persons to keep cattle in infected sheds, leads to the whole of this system. I will now refer to a return from Mr. Valentine, the inspector of nuisances for the Hackney district. He is assistant to the inspector who was appointed by the justices of the Tower Hamlets, and whose appointment has been countersigned by Mr. Helps. Mr. Valentine was appointed by the Board of Works of the Hackney district, to ascertain the condition of the cowsheds generally; to visit them from time to time, to see that the animals ordered to be buried were properly buried, and to act as assistant generally to the inspectors, Messrs. Child & Corby, in Mare Street, Hackney (the two, conjointly, act as one inspector in the Hackney district). Before the outbreak there were 82 cowsheds, in which 1,220 cows were ordinarily kept. The earliest outbreak, so far as I know, took place in Hackney in the latter part of July. Mr. Valentine reported to me that since that time nine cows have been buried, 136 have been sent to the knackers, and 596 have been removed, making a total of 741 out of 1,220. I believe there were many other instances of cows, apparently healthy, being sent to market from infected sheds; a large number of those 596 were sent to the market, but part of them were sent to slaughter-houses in the neighbourhood, and what became of those we do not know; so that here, out of 1,220, 596 had been thrown upon the markets or upon the slaughter-houses, and had most probably been used as food.

3732. (*Chairman.*) The 1,220 cows was the number of cows which were ordinarily kept in the Hackney district?—Yes; in 82 cowhouses. But I wish to call the attention of the Commissioners particularly to this fact, that out of this number only nine have been buried on the premises; the Order in Council is to bury them on the premises; but that order will be evaded. I see a modification of it in to-day's paper, but that modification has been really carried out previously; and if this obtains in a suburban district like Hackney, what, I would ask, must happen in the city, or in a place where there are no fields or spaces to bury carcases in? I issued, by order of the Board, directions to the cowkeepers for purifying sheds, and for disinfecting the animals, in the hope of checking the disease. The report of the inspector was that there were only nine buried out of this large number. What became of the 139 that were sent to the knackers I cannot tell you; but with regard to the 596, there is little doubt that most of them were sent to the markets, or to the slaughter-houses, to be prepared for food.

3733. Did those 596 animals come from the infected dairies?—Clearly, every one of them, unless there is some error in the return. Upon this are based my propositions; viz., that the establishment of sanatoria and Government slaughter-houses would lead to a far less injury to property, and to far less spread of the disease, as well as give an opportunity for treating this disease upon a scientific and medical basis. 596 of the whole number were sent away; some of them were driven away; they were not removed in knackers' carts; 136 were taken away in the last stage of disease, or when dead; and nine were buried out of 741. What an amount of disease must those 741 animals have spread, while they were being removed, without any precautions being taken to prevent the contagion; whereas, if they were moved to a sanatorium, the coats of the cattle could be disinfected; a cloth covered with disinfecting fluid put over the vehicles used for moving them; and also sand, or any other absorbent, might be sprinkled at the bottom of the trucks, for the purpose of receiving anything that might drop from the animals. With proper means I consider you would be able to remove animals to a sanatorium with far less damage to the public health, by having the cattle conveyed in proper ambulances, than by the present mode of removing them to knackers' yards or slaughter-houses or to markets. There is another point upon which I will make a few remarks; and it is as to the slaughter of fat animals. I think that the animals brought from the infected localities or London cowsheds to the markets might

be slaughtered immediately after they were sold without any great loss to the owners being incurred; and that healthy animals coming from non-infected places might be distributed throughout the country. I think that that would be a kind of compromise between the system of slaughtering animals and that of distributing them, as, certainly, has been done, by means of the Islington Cattle Market, broadcast throughout the country. This disease has originated, I believe, in the London cowsheds, because the London cows after a length of time become completely changed; their coats become thinner and shorter, and they are more liable to pleuro-pneumonia and other diseases, and are far more delicate; they are fed upon grains and upon other matters, and after a time they get into an unwholesome state; just in such a state as, after the summer we have had, would be likely to induce a disease of this kind. I have attempted in many instances to find out how the infection has been conveyed; and I have utterly failed in ascertaining, in many instances where the cowsheds are situated some distance from any thoroughfare, any means by which the herd could have been infected. In several places no fresh cattle had been brought into the sheds for six or seven weeks before the outbreak had taken place, and I have been informed that all strangers had been strictly excluded from these dairies. Several were places to which there was no public throughfare certainly within 100 yards, and yet the disease has appeared there, and swept all away. In one shed 27 were carried away, and I could not discover any means by which the infection had been brought to the place. The same thing has happened in many other sheds in the district.

3734. (*Viscount Cranborne.*) How near might any infected beasts have been in the case you have referred to? — They could not have come within 100 yards; the cows were placed at the back of the premises, and no beasts could have come within that distance of them.

3735. (*Dr. Parkes.*) I presume that the reason for killing beasts which are affected with the Rinderpest is to get rid of the contagion as quickly as possible? —Quite so.

3736. But if those which are in an incubative stage of the disease are not killed I do not see that we shall be much better off. An animal is ill with Rinderpest in a dairy, and instead of killing it you desire only, as I understand, that it should be taken to a sanatorium?—Yes.

3737. What would you do with all the rest?—I would leave them in the shed, using of course proper disinfectants, and disinfecting the animals, so far as that can be done; you cannot disinfect the inside of the animal, but you can disinfect the coat.

3738. Then you would issue an order that no animal should be removed from or admitted into that shed?—Yes; I would also have a system of shed-to-shed inspection, and a personal inspection of every animal, either daily or every other day, by which means the first symptoms of the disease would be detected; for I hold that if not detected in the early stage you are too late either to slaughter or to treat with much hope of success.

3739. That constant inspection would be carried out in the case of a cowshed in which the disease had appeared?—Yes; I would have every cowshed visited, because I believe that the cowkeepers will not give you the information sufficiently early, if at all. For instance, I have been told by cowkeepers that they had not lost any cows, when I knew from trustworthy information that they had lost many. One man had lost 15, and said he had not lost one.

3740. To carry out a system of inspection of that kind, what staff do you think you would require in Hackney?—We have 82 sheds there, and 3,300 acres. I should say that four inspectors would be required, or three at all events, to carry out such a system, and to devote all their time to it.

3741. How many inspectors are there employed now?—Two; the inspectors do not devote their whole time to their duties, and are only required to act after receiving information; that is, they do not usually act of their own accord; and there lies the error of the system.

3742. I think I now understand your plan; but what evidence have you to show that the disease is curable? — I have very little evidence upon that point, because the only treatment advised by the inspectors has been the slaughtering of the cattle, so that very few have been treated. Some have been treated upon one plan by the cowkeepers, and some upon another. My own opinion is, that some systems of treatment have proved decidedly objectionable, and others have proved beneficial; but as I do not know of any number of facts I cannot give you any data upon which to suggest a cure.

3743. Your recommendation of sanatoria is based upon general principles, and not upon any practical experience as to the curability of the disease?—I can state this, that of many animals which have been condemned by the inspectors, and ordered to be killed as being incurable, several have recovered when they have been left entirely to themselves.

3744. How would you manage in the country districts where no sanatoria were established, and the disease entered for the first time?—I would kill the animal at once.

3745. And put the remaining animals on a farm, or in a herd, under inspection?—Yes; and I would properly disinfect the sheds and the animals themselves.

3746. If another animal took the disease you would kill it?—Yes.

3747. Wherein would such a system as that differ from that which is now in force?—In this, that the disease had spread extensively before this system was carried out. I think that killing a few animals in an isolated place would be sufficient to stamp out the disease; but where the disease is once disseminated throughout the country I think the plan of killing is one by which a far larger number of animals will be lost than by treating those which are affected by the plague.

3748. Referring to the first symptoms which are exhibited, most of the reports on Rinderpest state that the lungs are found to be sound?—All I can say is, that upon auscultating cattle I have in most instances found, in the first place, a remarkable dryness in the breathing; just what you observe in the very early stage of pneumonia; and, secondly, you find to a certain extent congestion and crackling; but a gentleman present, who has seen a large number of cases, far more than I have, will be better able to speak to this than I am. With regard to the lungs being diseased, I can say that I have noticed an alteration in the breathing.

3749. Have you observed that in cases not complicated with pleuro-pneumonia?—Certainly, as far as I have seen, no pleuritis has ever existed; and, secondly, I have observed that the lungs do not consolidate; they become heavy and congested, and the blood is dark, and it coagulates very firmly indeed; therefore differing materially in the post mortem appearances from pleuro-pneumonia.

3750. Can you state the date in the month of July when you first became acquainted with the existence of the disease?—I should say that it must have been about the 30th or 31st of July; but some animals had died in the district before that.

3751. At what date?—I think it must have been about the 17th of July, but I am not certain upon that point. I know that a herd was sent on the 17th of July out of the district, and that a large number of that herd died before the end of the month.

3752. Do you know from what dairy they were sent away?—Yes.

3753. Can you give the name of the dairyman?—His name was Strong; it was either Strong's cowshed, or the cowshed at the Triangle in Hackney but I will get accurate information upon that point.

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3754. You think the date was the 17th of July?—Yes, when he sent the herd away, and the disease broke out subsequently in that herd, and, as he states, he lost the largest number of them.

3755. It has been stated in evidence that the first case in Hackney occurred on the 28th of June?—I am not aware of that case. Might I ask in whose shed it was?

3756. Mr. Baldwin's?—I think that Mr. Baldwin's shed must be in Dr. Sarvis's district; probably in the Hackney Road.

3757. In what condition are the dairies in Hackney generally?—They are in fair condition. I do not consider them in first-rate condition; but a committee has been appointed by the board to inspect the cattle sheds, as well as myself. I go round first, and point out any alterations that I require to be made, and then the committee go round afterwards.

3758. Are they in good condition as far as ventilation and cleanliness are concerned?—Yes; but I would rather have more ventilation. My own opinion is that cowsheds should not be in London at all.

3759. What evidence is there that this disease originated in the London parishes?—In the first place, the absence, as far as I have heard, of any undeniable proof that the disease was brought from Revel. In the second place, the inability of finding out how the infection came in about half the cases. It is difficult to prove a negative, but having failed to ascertain any mode by which the infection was brought, I think it is a fair inference to draw; but I have no evidence.

3760. In Hackney the cowsheds are not in such a bad state as would apparently give rise to so serious a disease as this?—I think that the mode of keeping the cows is at the root of the whole matter. They are kept in milk for 18 months or two years or longer; they are stimulated with grains, and, as I have before stated, a long residence in the sheds shortens the coat, enfeebles the constitution, and predisposes them to disease. I do not think that the state of the cowsheds, independently of the condition of the animals, and the extremely hot weather we have had, could have originated any such disease as this.

3761. Do you suppose that such conditions as you have mentioned, and which have been in existence for a long time, and such weather as we have had, could possibly have given rise to a specific disease of this kind which is propagated by contagion?—I am not aware that we have had any such season as the present, before. I am one of the honorary secretaries of the Meteorological Society, and I have kept a record for years, and I am not aware that we have had such an extraordinary and continuously dry hot season before; we have had a higher temperature occasionally than we have had in this year; but it has been a very dry year, and there has been a most unusual continuance of high temperature.

3762. That would apply, would it not, to the latter months of the summer?—Yes.

3763. The disease appeared in England in the middle of June?—It is said so; but I had not seen any cases in Hackney in the middle of June.

3764. Nevertheless it was in England on the 24th of that month before the operation of the causes you have alluded to?—If it existed in England on the 24th of June of course it would affect very considerably any opinion of that kind.

3765. You have referred to cases in which the disease apparently originated spontaneously?—Yes.

3766. Were there any examples of several simultaneous outbreaks in your district?—At first we were pretty free. I do not think it appeared severely until about the 8th or 10th of August, and then we had an outbreak almost over the whole district.

3767. In every cowshed?—No. I think that out of the 82 cowsheds about one fourth had become affected within a very brief time, and subsequently to that the majority became affected.

3768. In some of those cases you could trace the entrance of the contagion, and in others you could not?—Yes; some of the first cases appeared in cattle which came from the Metropolitan Cattle Market; nearly one half of the outbreak occurred in the cattle which had been brought into the district, and in the other half I was quite unable to ascertain any cause for it.

3769. There had been no fresh cattle introduced?—Yes; there were some extra. In one shed a bull first took the disease, and it spread then to the cows. No fresh cows had been introduced; but there was a thoroughfare, with a louvre board opening to it close to the cowsheds, and the bull was next to the louvre board, and in that instance, I think, the infection must have been taken through the louvre board, next to which the bull stood.

3770. Does not that case rather shake your notion that the contagion was not introduced into the district?—No; in some cases the sheds were so isolated, and I could not ascertain any mode by which the disease could have been introduced; but a person might have visited a shed who had previously been in another shed that was infected. In one case I was informed that the owner had not bought any fresh cattle for six or seven weeks, and more than that, in another instance, in which it broke out. I was assured that no stranger had been there, and in the first-mentioned case the shed was nearly 100 yards from any thoroughfare.

3771. I understood you to say that a great number of the cattle that were killed were probably sold for food?—Yes.

3772. Have you traced any injurious effects on the public health from the consumption of that meat?—No.

3773. Not a single instance in which any disease has been attributed to it?—No; and I may say that I would not hesitate to eat the meat, if the animal had been killed in the earliest stage.

3774. All parts of an animal; the tripe as well as the muscles?—No; but I would not hesitate to eat any of the prime parts. I knew an instance in which a fine beast had been condemned by a veterinary surgeon; two inspectors of markets subsequently examined it, and stated that it was sound. I am informed that twelve butchers dined off a sirloin from that beast, and that they were none the worse for it.

3775. Are there any signs by which meat taken from a diseased animal can be detected?—None, in the first stage.

3776. Is there nothing in the colour of the meat to indicate it?—It is a little darker in the advanced, but not in the early stage.

3777. (*Dr. Playfair.*) If I understand your evidence correctly, you would have, as an improvement upon the present Orders in Council, sanatoria established, and have ambulances provided for the removal of cattle in all the towns of the kingdom?—I did not say that. I would try sanatoria, for the purpose of ascertaining the best mode of treatment.

3778. In all the towns of the kingdom?—No. I would first have one or two in London, and I would then ascertain the rate of mortality in the sanatoria, and whether or not it would be advisable to extend them to other parts of the kingdom.

3779. In the meantime would you go on with the present Orders in Council as to slaughtering in the rest of the kingdom?—Wherever the disease broke out for the first time, I would; but if a large number of animals were infected in a district I would separate the sound from the unsound. In the event of there being only one or two diseased, I would take them out, slaughter them, and disinfect the shed and healthy cattle. If there was a large number diseased I would remove the healthy, after disinfecting their coats, to some isolated place.

3780. You would separate the diseased cattle from the healthy cattle, and treat them?—Yes; where it had broken out to any extent; but where it appeared

for the first time I would slaughter the infected cattle, unless the number infected was large.

3781. In what time do you think you would obtain useful experience from sanatoria?—I think that in the course of a month, with a sanatorium on a large scale, you would be justified in pointing out to cowkeepers a mode of treatment; and this is the more desirable, as cowkeepers believe that veterinary surgeons have not studied the diseases of cows, and consequently will not employ surgeons. I think you would be able to point out, not a specific, but a general plan of treatment.

3782. Does the history of medicine afford us much encouragement for hoping that a severe plague of this kind may be treated in a curative way?—I think that the history of typhus and of typhoid fever in man certainly affords great encouragement with regard to removing diseased cattle from the localities in which the disease breaks out, sanitary measures being afterwards used to prevent the spread of the disease. I think that taking the cattle away, without disinfecting the coats of the animals, would not do. They should be disinfected by washing their coats with three ounces of chloride of lime to a gallon of water, and by using, two or three times a day, chloride of lime in the sheds, by taking away the manure, and, in fact, generally adopting proper sanitary measures in the sheds. I think the two must be combined, and I do not think that the one without the other would do it.

3783. You approve generally of sanitary measures?—Yes.

3784. In the history of cholera has medical science discovered any great curative remedy in the 40 years during which that disease has been studied?—I have been sanitary officer during two epidemics of cholera, and I observed that the moment sanitary measures, such as those which I advise at present, were put into force, the disease from that time decreased.

3785. We probably all agree that hygienic and sanitary measures are of the first importance; but the question now is, whether we should wait, before vigorously acting in the country, for any experience which the medical men may gain as to a specific cure for the disease?—I can only repeat what I have before stated, that I would try immediately to stamp out the disease where it first appeared in a district; but I would not carry out that system where the disease had spread extensively. When the cholera came you had a far larger proportion of cures in the latter part of the epidemic than in the first.

3786. And you may expect that now?—Yes.

3787. In the several centuries in which the attention of medical men was directed to the human plague, was much information obtained as to curative measures?—Not much; the great cure for the plague in the metropolis seems to have been the Fire of London.

3788. And hygienic measures?—Yes, afterwards.

3789. As far as I understand your evidence, you believe that this disease might be best combated by putting in practice hygienic measures on a large scale?—Yes.

3790. More by that means, perhaps, than by any direct specific cure?—I do not believe that there is any specific cure; but I think that from the condition of the blood the treatment most likely to be successful would be a system of chlorates or nitrates, or medicines of that kind. I think that they would be more likely to be successful than large doses of stimulants.

3791. Have you any hope that we might attain the same advantage by improving the hygienic condition of the cattle as we did in the case of the human plague, so that the disease shall not fix itself in this country?—I think not; I speak, however, without proof. The disease spreads in the open fields and in the best kept sheds, in about the same proportion as in the filthy and ill-kept ones.

3792. Was not that exactly the history of the human plague when it first visited this country, and did it not penetrate into the best-conditioned places as well as the worst?—Yes; but not in the same proportion.

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3793. And when hygienic measures were put in force, it failed to fix itself in the country?—Quite so.

3794. Is it not, therefore, possible, by resorting to hygienic measures, to attain the same conditions with regard to the cattle, and so prevent the Rinderpest from fixing itself in the country, as in the case of the human plague?—I believe that hygienic measures would be of great service, by improving the general health of the cattle; for the history, as far as I can ascertain it, has been, that the weakly cattle have suffered most; those with the short coats that I have before described, which had been kept for a long time upon grains, were those which suffered most severely, and therefore hygienic measures, by improving their general health, would undoubtedly be a benefit, but the disease has spread in Hackney as rapidly in a field as in the cowsheds. I do not, therefore, hope so much from hygienic measures in the open country as in the cowsheds of London.

3795. You are aware that in 1745 the disease spread in the cowsheds of London, as it has done in 1865?—Yes.

3796. Do you think that if you improve the condition of the London cowsheds, where this disease has appeared, there will be less chance of its spreading to other parts of the country?—To a certain extent only. My own feeling is clearly against having cowhouses or slaughter-houses in the metropolis.

3797. (*Chairman.*) Do you consider that the establishment of sanatoria will be sufficient to eradicate the disease from the country?—I do not know; but I think that the great object of establishing sanatoria is to obtain information as to the best mode of treating the disease.

3798. You would, I presume, recommend some sanitary police measures, in order to prevent the spread of the infection?—Yes.

3799. You said something as to the burial of carcases in the metropolis, and I think you stated that the present mode was inefficient; what suggestion have you to make as to the mode of dealing with the carcases of animals which have died of the disease?—I would remove the carcases in ambulances, using proper disinfectants, to some places where they could be destroyed, and where they could be converted into useful substances, made into blood manure, for instance.

3800. Could that, do you think, be done without spreading disease along the road over which they were taken?—I believe that the disease would be less spread in that way, proper disinfectants being used, than by the present slovenly mode of moving them in knackers' carts.

3801. Evidence has been given as to slaughtering all animals that come to the market, and not allowing any of them to leave it alive. Do you believe that that system could be carried out as long as there are private slaughter-houses in the metropolis?—No. I think also that that plan is not advisable, unless cattle came from an infected district. I think that the effect of it would be that you would drive all the cattle from London, and have more meat sent up to the market unfit for use. I believe that you would get a larger proportion of diseased dead meat sent to the market than you have now.

3802. You believe that diseased animals would be killed; that the diseased meat would be sent up to the market, and that you could not detect it?—Yes; there are no means of detecting it, except at quite the last stage; then the meat becomes dark, and it will not keep.

3803. If foreign cattle were to come to London only to be slaughtered, could you make sure that they were not sent afterwards alive into the country without prohibiting the private slaughter-houses?—I do not see how that is to be carried out. If you allow the cattle to be removed from the market to be slaughtered in the London slaughter-houses, you

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will have no guarantee that, instead of being slaughtered, they would not be taken elsewhere. There is also another objection, viz., by ordering foreign cattle to be slaughtered you would stop importation, because if the cattle were to be sold with a knowledge that they must be slaughtered immediately they would fetch so low a price that no cattle dealer would send them.

3804. Would that be the case if the order was applied universally over Great Britain ?—I think so.

3805. Is it your opinion that the spread of the disease throughout England is to be attributed in a great measure to the fairs and markets which have been held in the different towns ?—Yes. I think that the disease has been spread throughout the country from London as a focus. At the same time, I think it was spread before the city authorities knew that the Cattle Plague was in existence here.

3806. (*Mr. Read.*) Do you not now get bad dead meat from the country to London ?—A good deal.

3807. If you allowed cattle to be moved from the market to private slaughter-houses without any check, would not those cattle, to a very large extent, get into the country, and not be slaughtered here ?—If they did part would come back as dead meat.

3808. Would it not be possible to make it penal for any person to convey cattle out of London ?—The question is, who is to carry out such a law.

3809. If you made every policeman an informer could not such a rule be carried out ?—There are already orders against moving diseased cattle, or healthy cattle from infected sheds ; but there are not sufficient inspectors to watch the sheds, and to prosecute afterwards. The police do not seem to be the proper persons to put such orders in force.

3810. Then the Orders in Council are inoperative because no one is authorized to carry them out ?—They are partly inoperative for that reason. I think that you should have a sufficient staff to take down the number of the cows in a cowshed, and then if one was missing, the inspector should enquire what had become of it. You would have some hold upon them in that way, and a constant system of inspection is the only way of ascertaining what has become of the cattle.

3811. Would it not be much easier, if it were made penal to drive cattle from the metropolis into the provinces, to detect it ?—The question is, what is London. The metropolitan district is so very extensive, that the law would be easily evaded by moving cattle a little outside of the boundary, and then driving them in a cross direction, as if they were coming from some other place, and not from London. A large proportion of the 596 animals removed in Hackney were, I believe, removed without an order from an inspector, and there has not been one single conviction for so doing. This I think shows the extent to which the orders are habitually evaded, and the difficulty there is of carrying them out.

3812. Do you suppose that this disease is the Rinderpest ?—Not having seen the Rinderpest, I cannot give you any opinion.

3813. Have you not read the history of it as it has appeared in foreign countries ?—I have read in the newspapers the letters which have come from some of the professors.

3814. Have you read any accounts of the treatment it has received from scientific men abroad ?—No, except what has appeared in the newspapers.

3815. Nor that all treatments have generally failed ?—I know that fact ; but I do not see, because they have failed elsewhere, that that is any reason why one or two sanatoria should not be established ; and if you prove in England that the disease is absolutely incurable, and that it cannot be treated, you will then satisfy people.

3816. Can you suggest any sanitary measures for the treatment of the animals which are now in the Norfolk pastures and marshes ?—No ; that is just the point. I cannot see any mode of sanitary treatment for animals in fields and marshes.

3817. Do you know that the mortality is as great there as anywhere else ?—Yes ; but my evidence has reference chiefly to the London districts, and I think that in a city like London a different system requires to be established.

3818. In the case in which you stated there was a difficulty of breathing, but no running at the nose, had the animals other signs of the disease ?—I cannot answer that question. I merely just put my ear to the animals.

3819. You probably know that running at the nose and eyes is not the first symptom ?—Yes.

3820. Most frequently a farmer would discover that a bullock was ill a long time before he observed those symptoms ?—No doubt ; it is, however, one of the difficulties, that animals may be ill from cold and other causes, and yet have the symptoms which are described as being the premonitors of Rinderpest, so that we want, if possible, to discover some peculiar symptoms which would enable cow-keepers to distinguish Rinderpest in an early stage. I think that a practised eye would be able to see somethink about an animal, he could not tell exactly what, which would enable him to say that the animal had got Rinderpest, while at the same time another eye would pass it over.

3821. Farmers might see it sooner by such symptoms than you could detect it in the breathing ?—Quite so, and perhaps sooner that way ; but shortness of breath is not a symptom peculiar to Rinderpest.

3822. (*Chairman.*) You have stated that you do not consider the present Government measures sufficient. What measures would you suggest for stamping out the disease in the country, besides providing sanatoria ?—I would appoint, in any district where the disease appeared, a person whose whole business it should be to inspect the locality, and of course, if he went from shed to shed, that he should use proper precautions to prevent his clothes becoming infected, so that he should not carry the disease away with him. I would follow out the Government system in that way in any district where the disease appeared.

3823. Do you believe there is a sufficient number of competent veterinary surgeons in the country to carry out thoroughly and properly the Government regulations ?—No ; besides which I think that the veterinary inspectors are not quite the right people to do it, because, as a rule, they have nothing to do with cow diseases. The first Government inspector was appointed for my district and the adjoining one ; there was one inspector to 5,000 acres, and he could not carry out such a plan as this in consequence of the size of the district and the number of cattle.

3824. Who would be the proper inspectors to carry out the regulations, amended as you would desire to see them ?—My plan would be to educate a certain number of cow-leeches in the sanatoria. In a few days they would learn to detect the early symptoms.

3825. Is it not rather late to do that ?—I think it is rather late now to do it.

3826. (*To Dr. Aldis.*) Will you state what position you hold. I am a Doctor of Medicine of Cambridge, a Fellow of the Royal College of Physicians of London, and Medical Officer of Health for St. George's, Hanover Square. I am not prepared to give evidence. I came merely to attend with the deputation. I attended at the Privy Council Office on a former occasion with the Lord Mayor, and Mr. Gibbins, and a deputation, to support the principle of sanatoria, and also to suggest the propriety of a Commission of this kind being appointed ; and Lord Granville stated that it was then in contemplation to appoint a Commission. I may state that many persons have expressed their regret that such a Commission was not appointed at an earlier period, and that instead of receiving information first hand, which might have been obtained if an earlier Commission had been appointed, you should now have to rest upon information obtained second-hand. We

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should then have been prepared. There would have been more self-reliance in the country, and we should have had more data to go upon. I have taken great interest in the progress of the disease, and I reported upon an outbreak that occurred at Eltham in Kent. The report appeared in the "Times" of September the 14th last. I there observed, and it was so reported, that out of the first 45 animals that were attacked 14 recovered, without any of them undergoing any treatment. At the same time others died which had been put under treatment; but they were treated by a gentleman, who, I understood, was not a member of any veterinary college, but he was a gentleman who practised as a veterinary surgeon. Seeing that 14 out of the 45 attacked recovered without any treatment, it struck me that with judicious treatment more might be recovered, if properly managed. Some observations have been made by the preceding witness, Dr. Tripe, with regard to the breaking out of the disease without contagion. I think I have had some evidence upon this point in my own district, and I have made further inquiry about it this morning in the case of Mr. Prett, a cowkeeper, who had only eight cows. One sickened, which he had sent to market. It was seized there, and was not allowed to return, because it was alleged that it had the disease. He sold the remaining number. I saw his books, and it appears from them that he has had no fresh cows in his shed since March last. It seems to me that the doctrine of contagion has been overdrawn in this country, like it always has been whenever any epidemic has shown itself; the same thing occurred when the cholera broke out; it was alleged that it was contagious, and a panic was created as to the cholera, a number of persons believing that it was extremely contagious; but that doctrine was proved to be utterly fallacious. I can assure the Commission, if I may refer so far back, that I was brought up in the school of contagion, so much so that fever was said by a learned professor to have existed in a certain house, which was whitewashed, and everything done to purify it; but the fever returned, which could not be accounted for, until a Latin grammar found in a cupboard was said to be the cause of the reproduction of the fever; it was so stated, and it is now well remembered by some of my colleagues. I afterwards went to another school, to St. George's Hospital, where Dr. Chambers practised for several years, and taught quite opposite doctrines; he stated that he had never seen typhus or typhoid fever spread in the hospital; there were two that joined then, and the older one was the worst ventilated hospital in London, but the situation was so good that he attributed to that the fact of the disease not spreading to the other patients, whereas in other hospitals it did spread, especially in those that were near to the river. He argued that the physicians and the nurses that lived in the locality were probably predisposed to the disease. My own opinion is, that the doctrine of contagion has been over estimated in the Cattle Plague, and I also believe that in this case of Mr. Prett there may have been a miasm in the air, and not only in that case but in several other instances this miasm may have produced, irrespectively of contagion, the disease. I observed the disease in my own district; there was a case where the symptoms were evidently pulmonary; there was a shortness of breath, and difficulty of breathing, and a running at the nose. The same symptoms occurred in all that I saw, or at all events in a good many of them that I saw. At Eltham the symptoms were principally of that character. I attributed the disease then, after making a post-mortem examination, principally to bronchial congestion, which was found to a great extent. I formed this opinion from the quantity of frothy mucus. I never saw so much in my life in the trachea. The bronchial symptoms might, no doubt, have been detected in a very early stage by auscultation. From what I saw of the disease I should be disposed to call it catarrhal fever, but others have found the mucous membrane of the bowels either congested or ulcerated. I detected much softening in the lining membrane of the third stomach. The term "typhus" gives us too much the idea of contagion, but I will refer to the derivation of that word. We derive it from a Greek word meaning stupor, and in none of these animals which I have seen have I observed stupor. I suppose they mean that there is a lowness or dulness in the animals. The animals which I saw were lying down, and they were dull and heavy; but there was nothing like the stupor or prostration of typhus or typhoid fever about them. An animal which I examined at Eltham got up, and walked about, and seemed shy, and it ran into a corner, and died in half an hour afterwards; and such symptoms I consider were very different from those of typhus or typhoid fever. The term appears to me to be totally inapplicable to the disease, and calculated greatly to mislead us. The term "low fever" one can understand better than typhus; but certain terms are applied which cause more difficulty than can be imagined. I may state that I had occasion to examine Mr. Cross's establishment in Old Ford. The case came before the magistrates at Worship Street. In that case I was asked to examine a diseased cow, but no disease could be found; and they told me that lately not more than one in four which had been slaughtered was diseased, so great was the panic created by the idea of its being of an extremely infectious nature. Dr. Tripe has stated that he was unable to explain what became of the animals after they were sent to the slaughter-house, but I have taken particular care to ascertain what has become of them, in one case, and I am able to state that they have been boiled. A first skimming was taken off, which became quite white without any smell. Two skimmings were taken off; the first was very white, and looked very pure, and to my great surprise, and I must say disgust, a man on the premises drank some of the liquor from the boiled meat, and tasted the skimmed fat. I was cross-examined upon this point, the object of the question being to know whether he did not make a wry face at it, and I said no, that he really smacked his lips at it, in the presence of Mr. Clarke. I do not think that Mr. Cross was present.

3827. Was this skimming the result of boiling a diseased animal?—Yes; but whether they are healthy or diseased, it comes up; they were boiling then the healthy and the unhealthy, and the proportion of the diseased was one in four. Very strong sulphuric acid was poured over the meat, which became black, and was used for manure; there was no particular smell from it, except that of the acid, and it was rather refreshing than otherwise; there was nothing like putridity about it. The first skimming was very white, and it was sold to be mixed with soap, and I should not wonder to hear, if a cow were washed with it, to that would be attributed the contagion. This soap is made up, and sold. The second skimming was of a yellowish character, and I believe it was converted into soap. In my own district, in Mr. Hatt's yard, 12 only remained out of 103, and one of those only was diseased, but they had been condemned the day before I saw them. Mr. Dexter also lost nearly all his cows; there remain only two in his shed. A cow died in my district, and I was called up at night respecting its removal The drover was so alarmed that he ran away, and the police did not know what to do with it. It remained there, and was not taken away till the next day. That was in Effingham Street; there were 100 people round it. It is very difficult to arrive at any conclusion as to the actual commencement of this disease in sheds, because there has been so much concealment practised on the part of cowkeepers that it is almost impossible to give any precise data as to the time of its origin in London. I do not think I need detain the Commissioners any further.

3828. Do you think that any preventive measures

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should be taken to prevent the spread of the mortality in the country?—I think that there should be preventive measures taken.

3829. (*To Dr. Whitmore.*) What district do you represent?—I represent the district of St. Marylebone; and I may state that in that district the disease has been very severe. We have lost out of 1,300 cows a considerable number, something like 1,000 and of this number 300 have died with the disease, and the others have either been slaughtered from being slightly attacked with it, or have been sent away and sold for the purpose of avoiding the disease. I may state decidedly my opinion of the desirability of establishing a sanatorium for the purpose of obtaining information with regard to the treatment and pathology of the disease. I cannot apprehend that any very material good can immediately result from it, but inasmuch as we do know that a very virulent disease, the small-pox, decimated this country for many years, and that at last a remedy was found for it, we may hope that something may be discovered by which the fatal nature of this cattle disease may also be arrested. I may state that as the result of very considerable trouble which I have taken to ascertain the origin of this disease, I have come to the conclusion that it is an imported disease. I had reason to think with Dr. Tripe from the information which I obtained amongst the cowkeepers in my own district, that it did break out in the cowsheds, but I was not satisfied with the information which they gave me. There was hesitation and prevarication about it, and many indications to my mind that they knew more than they were at first disposed to tell. I have pursued my investigations further, and I have come to the conclusion that in almost every doubtful case that has come under my own knowledge I have been able to trace the origin of this disease, and I have traced it in many cases to the cattle market, even where the animals were said to have come from the country. Mr. Drewell, who owns a shed in Beaumont Mews, informed me that the disease broke out in his shed about the middle of July, and he stated that it could not possibly have come from the cattle market because it was brought to his shed by a cow which he had purchased at Edmonton. This cow had been supposed to be a very healthy cow indeed, and it was said to have come from some district further in the country, and from circumstances he satisfied himself that the disease did not come from the cattle market. However, by prosecuting inquiries, it was found that the cow which he had bought had actually come three or four days before from the cattle market, and from amongst diseased cattle. If the Commission wished it I could quote some other instances almost parallel to that, and therefore I have come to the conclusion in my own mind that it is an imported disease, and I am strong in that opinion from the fact that if we have it now why did not we have it 10 or 15 or 20 years ago. Why should it have come upon us almost as a new disease? That is the opinion which I have arrived at. With regard to its being a typhoid disease I have seen some post-mortem examinations of animals which have died with this disease, and I have seen them in various stages of the disease, and I have seen an absence of some of those post-mortem appearances which indicate typhoid disease in the human subject. I mean the want of that ulceration of a peculiar gland which is known as the Peyer's gland. In any of the dissections that I have witnessed I have never seen those glands in the state of disease in which they appear in the human subject, whilst on the contrary in healthy cattle at the slaughter-house of one of the best slaughterers in London, Mr. Way of Wigmore Street, I have seen a chronic diseased condition of those Peyer's glands, where the meat has been undoubtedly very good, that condition probably arising from disease in the animal in its early life; but I have always seen an absence of this symptom in the Rinderpest, although I believe every case has shown decided and continuous inflammation, to a greater or lesser extent, throughout the whole of the alimentary canal, from the mouth to the anus. Perhaps I may be allowed to add that it has been urged that there has been no marked symptom to characterize this disease from most others, but I have noticed one (and indeed it is not my own first suggestion), and that is the early inflammation of the organs of generation. The vagina of the cow invariably in the first symptoms of the disease is one of the first parts of the animal which appears to be affected; there is a blush of inflammation there before you find it anywhere else. I have very little further to say to the Commission. I have examined several animals that have been slaughtered, and, as far as my observation has extended, I should speak of it as a disease in the first instance affecting the whole of the mucous surfaces of the animal.

3830. Do you think the measures which have been adopted by the Government are sufficient, or do you think that additional measures of prevention should be taken?—I think that the most stringent measures should be taken to prevent the spread of infection. I would resort to the same measures as are resorted to on the continent in Prussia and Austria. I would isolate all the herds that are affected, so confident am I of the powerful character of the contagion; and with regard to the powerful character of the contagion, I may observe that in some seasons diseases become epidemic which are not so at other seasons; at one time you will have the disease sporadic and at another epidemic, and that will depend upon causes which of course we know nothing about.

3831. (*To Dr. Sarvis.*) What position do you hold?—I am an M.D. of Aberdeen, a Member of the Royal College of Surgeons of London, and medical officer of health for the Bethnal Green district. It might be as well for me to give the Commission some hints of a practical nature on the carrying out of the Orders in Council which have nothing to do with the medical portion of the subject. We find that the Orders in Council are not carried out. Cows have been driven from the sheds to private slaughter-houses, and there killed, and sold for human food, and there has been no surveillance at all over the cowsheds. An inspector has perhaps gone in when notice has been given, and in many instances where no notice has been given at all, he has gone into the sheds, but no account has been kept of the cows, and they have not only been taken to the private slaughter-houses, but they have positively been sent into the market. I believe that the cause of the spread of the disease is by cows being taken out of sheds, in an incubative stage of the disease, and sent to the cattle market, and put amongst the healthy cattle, where they have incubated those that were healthy, and those cows have been taken away all over London and to different parts of the country, and thus have spread the disease. I can only say that directly the disease is known in a shed, I should recommend that a policeman or some person should be put in that shed, and keep watch upon the whole of the cows, and know where they go to; for if you do not do something of that kind you will have them driven off, and certainly send unhealthy food into the market, and you will send unhealthy cows also into the market, and spread the disease around. Many cows that have the disease are sent into our district to be slaughtered, as Dr. Tripe has told you was done with Mr. Strong of Hackney. We have seized a great deal of meat that has come from the other districts, and unless you look well to it I am sure the disease will go on as long as it did before.

3832. You state that you believe that the public markets have been the means of communicating the disease throughout the country. What measures would you suggest to prevent that evil?—Directly the disease was known to be in any shed, I would put somebody to watch to prevent any animals being taken from that shed. First of all you might get it at the market; but it must be taken to the market from somewhere. How has it got there, and how

does it get there? No doubt it was imported from Russia in the first instance; it then spread to the cowsheds, and it has been taken backwards and forwards to the market. The only way in which you can prevent the extension of the disease is, directly the disease is known, to put a person in the cowshed to keep watch over the cows to see where they do go to.

3833. You are aware that the disease has spread very considerably in England, and that from other infected districts besides the cowsheds of London infected animals may come to the Metropolitan Market; how would you check that?—I would have them examined singly before they came into the market, and not allow them to come in until they had been passed by the veterinary surgeon. I believe that the symptom which Dr. Whitmore has named, the inflammation of the vagina is the very earliest symptom that you can detect, with a general dryness of the skin.

3834. (*Chairman.*) (*To Mr. Gibbins.*) Have you any further information which you wish to give to the Commission?—I would, perhaps, just call attention to one question asked me on the last occasion when I had the honour of appearing before this Commission, namely, with regard to the number of cattle leaving the market unsold. I have that information before me, and I find that on the 2d of October there were 6,550 beasts in the market. Out of that number 4,000 were sold to be slaughtered in and round London, 1,950 were sent away to the country for that purpose, to different parts of England, and 600 remained unsold; and out of that number the owners of 492 refused to have their cattle's tails marked. On the following Thursday, October the 5th, there were 1,160 beasts in the market; 700 were sold to be slaughtered in London, and 250 were sent into the country, out of which 112 were unmarked. On Monday, October the 9th, there were 5,830 in the market, 3,500 were sold to be slaughtered in London, 1963 sent into the country, and of those 463 went away unmarked. On October the 12th there were 1,190 in the market, 650 were sold to be slaughtered in London, and 260 were sent into the country, and 126 were unmarked. Last Monday, October the 16th, there were 6,340 in the market; 4,000, as near as we could tell, were sold to be slaughtered in and round London, 1,874 went into the country, and 374 were unmarked. So that with all the care that we have taken we cannot prevent their leaving the market without the mark being upon them.

3835. (*Mr. Read.*) (*To Dr. Aldis.*) What meaning do you attach to contagion; do you mean actual contact?—No, not actual contact. I think that the idea of contagion is over estimated. It was the case when cholera first appeared in this country, or when any other epidemic disease broke out; in fact, contagion seems to be a bugbear. Cholera was thought to be exceedingly contagious, but it has been proved not to be so. I think, perhaps, that in the present disease the alarm as to contagion is overdrawn.

Dr. Sarvis.—There is one point to which I should like to call the attention of the Commission, namely, that is, in the case of cows dying in the street some immediate course of action should be adopted; our sanitary staff cannot order its immediate removal, and that has created great alarm. On one occasion when a cow in our district died in the street, the police said they had nothing to do with it at all, and the magistrate to whom application was made said that he had no jurisdiction in the matter, and the cow was left in the street for a very long period, and caused great alarm.

3836. (*Chairman.*) Had not the local officers ample power to remove it?—Yes, they had; but they must give notice in the first instance, and the delay would be too great. If it was simply treated as an obstruction in the first instance the dead animal would very soon be removed; but at present there is no power except through the order of the magistrate.

Dr. Tripe.—The order is that the Government inspectors should give notice directly to the inspector of nuisances; but a summons is very rarely returnable under a week, and certainly not under three or four days.

Dr. Sarvis.—The fear of the disease is so great that it would be well if it were treated by the police simply as an obstruction, and removed. That is a point which should not be lost sight of.

3837. (*To Dr. Tripe.*)—Are the officers of health obliged to have recourse to the magistrates to carry out orders which are resisted?—Yes, for everything. We can do nothing except by the order of the magistrates.

3838. (*Chairman.*) (*To Dr. Sarvis.*) Have you seen frequent instances of cows dropping in the streets?—No; only this one in my district.

The Deputation withdrew.

Mr. Henry Gray Brydone examined.

Mr. H. G. Brydone.

3839. (*Chairman.*) Where do you reside?—I live at Petworth in Sussex. I am Chairman of the Cattle Plague Association there, and agent of Lord Leconfield's estates.

3840. (*Viscount Cranborne.*) I believe that you are desirous of making some representation to the Commission concerning the turning out of cattle upon common lands?—Yes.

3841. What is your opinion as to that practice?—I think that it would be very desirable to put a stop to the turning out of cattle upon common lands.

3842. Of all cattle?—Of all horned cattle.

3843. Is it your belief that infection has spread widely in the country with which you are acquainted in consequence of that turning out of cattle?—I think it is very liable to spread in consequence of the turning out of cattle.

3844. Do you know of any instance of its having done so?—No, I cannot trace any.

3845. Have you got the disease in Sussex?—Yes, in our immediate neighbourhood. Our immediate district is tolerably free, but within five miles of Petworth, I believe, the disease exists.

3846. Is it largely developed there?—Yes; they have lost about 2,000*l.* worth of stock in our neighbourhood, and 1,000*l.* worth in another spot within five miles of Petworth.

3847. In that part of Sussex are the commons numerous?—Yes, they are numerous all over that part of the country.

3848. How was the disease introduced into that part of the country?—By calves bought in Chichester market on the 12th day of July.

3849. Is the transit of stock across the commons very frequent at this season of the year?—The transit is very frequent. The drovers generally leave the drove on the commons to refresh themselves.

3850. Do they do that at this season of the year?—Yes, at all seasons.

3851. Even in winter?—Whenever cattle are moving, they are commonly left to feed in the middle of the day near a public house, if there is a common near.

3852. Do cattle move in large bodies across Sussex on foot?—Yes, droves have been in the habit of coming to our fairs. Our fairs now are mostly stopped, but cattle is still moving about.

3853. Supposing your fairs were altogether stopped, would not the droves cease to come?—Yes, I believe they would cease. Several droves have come into our district quite lately, intended for certain fairs that have been stopped, and they have been taken in upon the different farms.

3854. But supposing that the fairs were altogether

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stopped, and the droves ceased to come, then the danger of turning out cattle upon commons would cease?—I think that the first thing that happens when the disease shows itself is, that a man sends to market all the marketable stock on his farm; and I think that the marketable stock that is sent off his farm immediately upon the breaking out of the disease is stock which is very likely to give the disease to any cattle that it passes through or comes in contact with.

3855. Any cattle that are sent to market because they are diseased would hardly come a sufficient distance to make it necessary to turn them out on a common for the night?—No; they would not be on a common during the night.

3856. Do you think that danger in their case would arise from their passing through the common in the day time?—Merely from passing through I think there would be danger, because when cattle are being driven other cattle generally run to them if it is an open place, and join them. If one set of beasts see strange beasts passing, they always run as close to them as they can.

3857. Speaking very roughly, what should you say is the average number of cattle that are turned out on commons in Sussex?—I am afraid I could not say the number.

3858. It is the practice entirely, is it not, of small proprietors?—Yes; it is the practice of smallproprietors and of the owners of inferior stock.

3859. The putting a stop to that practice would not affect the rich proprietors' stock in any degree?—I think not. I think that no valuable stock would be left out upon a common.

3860. It would probably affect the owners of half-a-dozen or a dozen cattle, generally speaking?—Yes; the smallest farmers, and the owners of one or two cows.

3861. The commons form a large part of the country only in Dorsetshire, Hampshire, Surrey, and Sussex; you do not know of them in any other part?—I am not much acquainted with them, except in Sussex. My acquaintance does not go much out of Sussex.

3862. You would approve, would you not, of the fairs and markets being stopped for a limited period?—Yes; we have memorialized to have them stopped by the magistrates in our neighbourhood, and they have mostly been stopped till about the end of November.

3863. You think it better that they should be stopped uniformly throughout the country?—Yes; I think that that would be desirable.

3864. (*Mr. Read.*) How are those commons stocked; are the cattle removed at night?—No; it is mostly stock turned out and left to take it chance.

3865. Are they open commons?—Yes; they are open commons, mostly with roads through them.

3866. When would those cattle in all probability be removed; would they be kept on the commons all the winter?—They would not be removed till Christmas, probably, unless snow came, or very heavy frosts. There is very little stock out now, because most people are afraid to turn them out; only very venturesome persons do it. There is a great quantity of grass on the commons now, more than the stock can eat.

3867. Generally speaking, those commons must be sources of disease on account of the commingling of all sorts of inferior stock?—Yes; I think so. I think that almost all the drovers stop on the commons and feed their droves; and a number of droves have passed through our county.

3868. You have been asked whether you approve of the stoppage of fairs and markets. I believe that you limit that opinion to store cattle. You would not prohibit fat-stock markets, would you, if all the cattle that went into those markets were killed in the town?—There is very great difficulty in distinguishing between fat and lean stock; if they could be distinguished I would not prohibit a fat market,

3869. Supposing an order were issued that all cattle that went into market should be killed in that town, would not that be a prohibition to store stock entering any market?—Yes, I think it would.

3870. Do you think that it would be a great hardship that all the fat stock exhibited in a market should be killed in that town?—No; I think it would be a prudent step, and it is the course that prudent people are now following. They would not take any stock to market and bring it home again on any consideration; but there are great difficulties in the way of killing in the town where the market is held.

3871. (*Viscount Cranborne.*) Is there any custom in your country by which the commoners have only the right to feed as many cattle on the common in summer as they can provide arable land for to keep them in the winter?—That I believe is the general law of turning out on commons; people are not entitled to turn out more than that number.

3872. According to that they ought not to turn them out on the common in winter at all?—They may, I believe, by law turn as many cattle on the common in summer as they have sufficient provender for in the winter on their enclosed lands, that is the limit of the right of turning out.

3873. That assumes that they do not turn them out on the common in the winter?—They leave them out as long as there is anything to eat on the commons.

3874. How long would there be anything to eat on the commons?—Till December, unless severe frost and snow came; but there would be very little stock out so late, and that of a very inferior character.

3875. The very inferior stock would belong to the poorest people. Would it be a great injury and pressure upon them if they were forbidden to depasture upon the common?—No, I think not.

3876. Would it force them in any cases to sell their cattle?—No, I should think not; it might in a few individual cases; I cannot tell how it would be in every case.

3877. Of course you must have within your personal acquaintance a considerable number of commoners of that kind; are they generally in such circumstances that such a pressure would bear hardly upon them?—No, not by any means generally; there might be a very few cattle on the common that might have to be sold in consequence, but it would be a very small number of the cattle out.

3878. Are they mostly cows or beasts on the common?—Mostly beasts; there are very few cows.

3879. I suppose the cows would be the cases where it would press the hardest?—Yes; but there are very few cases of cows out. Cows would not be kept out till December, because they would give no profit if they were starved on the common in December. Cows would be the best treated, and they would be the least on the commons; they would be taken in earlier, and turned out later.

3880. You would not care, would you, to apply the same order to sheep?—I think it would not be necessary, and it would be very difficult. In Sussex and perhaps in other counties, the downs or common lands come within the legal definition of common land, and the flockmasters would not know what to do with their ewes, if they could not turn them on the common. There is a great opportunity for any gentleman who is willing to practise upon cattle, or try experiments, in our neighbourhood, at Midhurst, because cattle have been dying there all through August and September, and all this month; and anybody who could offer any receipt, and stay by and follow it out, would get the thanks of the owners of the cattle.

3881. (*Mr. Read.*) Where did the calves that were bought at Chichester market come from?—I have not followed them; but the circumstances were very remarkable, and indeed unusually remarkable, about the calves from Chichester market. One I think was a particular case of a man named Puttick ordering a calf to be bought for him at Chichester market, and countermanding it on the evening of the

market day, and the person who bought it for him sold it to a man named Shotter, and the man named Shotter has lost about 20 head of cattle, the disease being taken by them from that calf. One of Lord Leconfield's tenants about five miles in a different direction also got some calves at Chichester market on that day, and he has lost 40 head. I believe that those calves were from London, but I have not inquired into the point so as to be certain.

3882. (*Viscount Cranborne.*) Supposing there were an order passed prohibiting the depasturing of cattle on commons, do you think that the local authorities would be able to enforce it?—There was a recommendation I believe, or something to that effect, in the beginning of August, when I was abroad, and therefore I do not know the particulars of it; but it recommended that cattle should not be depastured on commons, and in consequence of that recommendation very little stock has been depastured on commons, and for a long time nothing whatever was turned out. All August there were no cattle turned on commons in our part of Sussex, and even now many people do not even turn out cattle, under the impression that that recommendation has been given and ought to be followed, although it is not legally binding. I think, therefore, that any Order in Council would be generally obeyed, because it would go along with the general feeling.

3883. What penalty would you suggest? Would you propose that the cattle should be impounded?—No; it would be better to take proceedings against the owners before the magistrates. I believe that an Order in Council would be effective. I believe that it would be obeyed. Perhaps I may be allowed to state that we have a square district of 60,000 acres, and we have 50,000*l.* worth of stock insured in the association. The disease is active in the Arundel district, which joins us, and in the Midhurst district, which joins us, but there is no disease in our district.

3884. How have you prevented it extending to your district?—Happily it broke out in the first instance in our district on large farms where they had a great deal of stock at stake; and they isolated their stock, and so prevented the sweeping of their farms, and their farms defended their neighbours. At Midhurst it has unfortunately spread almost from field to field, but it has not gone much further than 2¼ miles in 10 weeks, which leads me to the belief that it might be put a stop to by isolation.

3885. (*Chairman.*) Do you believe that a system of isolation could be carried out pretty generally throughout England?—I think it could. The "Times" recommends, to-day, the killing of all stock at home if they are to be moved at all; that would be the strongest step and probably the best.

3886. (*Viscount Cranborne.*) That would rather interfere with the supply of meat, would it not, to the large towns?—A fat beast walks very slowly to market; it goes at the rate of about five miles a day or fourteen miles in three days, and then he drops down several times on the road; and if you want to send lambs several miles you put them in carts; so that you could carry those cattle dead in a shorter time than they could be driven from the market.

3887. You are rather badly off for railways in your county, are you not?—Somewhat; but there is a station within two miles of Petworth town.

3888. (*Chairman.*) You do not think that there would be great inconvenience caused if all the trade of the country were carried on by sending to market dead meat instead of live stock?—It would be a very great inconvenience; but the question is, to balance the inconvenience against the loss of the cattle of the country.

3889. You personally would not object to any regulation of that sort?—No, I would not object; it is a regulation which our society have proposed to establish in the event of the disease breaking out in our district. We propose in that event to say to the farmer of the particular farm, "You shall not move "one beast off your farm without the leave of our "inspector, whether it has been in the same herd "with the diseased cattle or not."

3890. (*Mr. Read.*) Is not that the Order in Council, independently of your society's orders?—Possibly it may be so.

3891. (*Mr. M'Clean.*) Then you consider a mutual assurance a beneficial thing, as you look after each other?—We have appointed an inspector, and we intend to make him work; we hope that he will help the Government inspectors, because, though very thankful for their services, we think that they are very busy with their ordinary affairs, and they will not devote all their time to the Cattle Plague.

3892. (*Viscount Cranborne.*) The stoppage of fairs and markets would not, as I understand you, stop the spread of disease at Midhurst, where it travels at the rate of two miles and a half in 10 weeks?—It has travelled about two miles in 10 weeks.

3893. It spread from field to field, totally independent of any traffic from fairs and markets?—Yes.

3894. So that without some measures of isolation that vehicle of spreading the disease could not be stopped?—No; it might, I think, have been stopped by driving away all the cattle that were within a quarter of a mile at the first outbreak. The stock are now dying within a quarter of a mile of the first outbreak in that neighbourhood, but it has not travelled into the Petworth district, owing mainly to the spot of the first outbreak being surrounded by sandy commons which can keep no cattle whatever, and wood lands, to the circumstance of its natural isolation I attribute the fact of the disease not finding its way into the Petworth district.

3895. (*Mr. Read.*) The disease would spread more quickly through a small farm than a large one?—Yes; and small farmers are unable to do anything, unless somebody comes to help them, and takes their cattle away to a great distance.

3896. (*Viscount Cranborne.*) Who introduced the two sickly calves from Chichester market. Was it a small farmer or a large one?—They were not known to be sickly at the time; the calves were bought in Chichester market as healthy calves for suckling purposes, and they had no idea that they were sickly; they were bought by Mr. James Challen of Heyshot and Mr. Shotter of Stopham.

3897. Is there anything else that you desire to mention to the Commissioners?—I might state that in the Heyshot district some cows have got through the disease, and are now alive and well.

3898. What per-centage have recovered?—In one case, I believe, four out of ten that were attacked have recovered.

3899. By any particular treatment?—I do not know the treatment, but the owner was a man of considerable intelligence and education.

3900. Have you any experience of Government inspectors in your district?—There is one Government inspector appointed for our district.

3901. Is he a veterinary surgeon?—Yes, he is a veterinary surgeon.

3902. Have you any local inspectors of your own?—We have one, but he has had very little to do at present.

3903. I mean appointed by the magistrates?—The Government inspector was of course appointed by the magistrates, by the petty sessions, which is the common mode of appointing inspectors.

3904. Do you imagine that the inspectors generally in Sussex are veterinary surgeons?—Yes, in two districts there are veterinary surgeons; but at Midhurst a farmer was appointed, owing to there being no veterinary surgeon there.

3905. Has this farmer all the powers conferred by the Order in Council of killing cattle, and so forth?—I believe he has; but he believes in the curability of the disease, and he does not kill much; and I think our veterinary surgeons do not kill much; they believe in the curability of the disease, and they will not kill; they say, isolate, and do the best you can.

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3906. I presume that isolation is easier in your country than in most, the population being sparser?—Yes, the population is sparse. I think that the Cattle Plague associations may do a great deal of good in some cases by assisting their members to isolate; a man cannot isolate without some assistance. I have isolated some stock out of a very bad district on the top of the downs, but I could not have done that if I had not had some influence.

3907. (*Chairman.*) Would you state how you did it?—The cattle were on a farm, and cattle were dying of the disease on the two adjoining farms, and were being buried within 350 yards. This stock was driven across the farm on which there had been no disease on to the adjoining downs, through a wood, on to a lonely farmyard where there are no cattle near, and there they have been left for rather more than three weeks, and they are perfectly well. The two cows on the lone farm that they were driven to have since been condemned for Cattle Plague, and are both dead, but the stock which I mentioned was not put in contact with those two cows.

3908. How do you account for that?—I doubt whether the two cows died from the plague.

3909. You believe that if those animals had been left between these farms where the plague was raging they would have died?—I think the probability was very great, owing to the disease being very active in that immediate neighbourhood, within less than 500 yards of them.

3910. Did they have to go through any part of the infected farm on the road to this isolated place?—They had no disease on the farm on which they were, and they were driven from that farm across the open downs. It was an attempt to try the experiment of isolation.

3911. (*Viscount Cranborne.*) I presume that your proposal for preventing depasturing on downs and commons could never apply to preventing the passage of any stock that might wish to go across?—No; not preventing their passage. I should not wish it; but it would be very desirable that people should keep stock on the main high road, and not go through bye ways.

3912. (*Chairman.*) Is it the habit in Sussex to let out the sides of the road for the pasturing of cattle?—It is used for the pasturage of cattle when it is connected with the common, so as to constitute, in fact, part of the common, but only, I think, in those cases.

3913. In some cases, in parts of the country, do not the parish authorities let out the pasturage by the side of the road to people to graze cattle upon?—I think that that is not done in our neighbourhood.

The witness withdrew.

Mr. JAMES TAYLOR examined.

Mr. J. Taylor.

3914. (*Mr. Read.*) You are inspector, I believe, at the port of Harwich?—Yes.

3915. How long have you been there?—About eight months.

3916. Are you a member of the Royal Veterinary College?—Yes.

3917. Would you state to the Commission the general health of the cattle that are imported?—The cattle which come to Harwich are particularly healthy, and also in the neighbouring districts round Harwich. We have never had but two cases amongst the Dutch cattle.

3918. Where do your cattle come from?—From Rotterdam and Antwerp.

3919. Is not the Rinderpest now very prevalent in Holland?—Yes, I believe it is.

3920. Still you have had no cases amongst your imports?—Only two.

3921. How did you treat those two cases?—They were slaughtered.

3922. What became of the rest of the cargo?—They were detained, and most of them slaughtered by the owners to suit their convenience, the carcases being inspected before delivery; the remainder were released after 14 days' quarantine.

3923. What sort of accommodation have you for slaughtering cattle at Harwich?—Very good.

3924. How many could you slaughter there in a day?—About 30.

3925. Do cattle ever disembark at Harwich in the night?—Yes.

3926. What sort of examination do you give those stock on their landing?—A very careful one.

3927. Could you detail to the Commission how you examine them?—All the beasts, if they arrive in the night, are tied up on the wharf by a head rope, or taken to the lairs, and the next morning I proceed to examine them.

3928. How do you examine them?—I have two men to assist me, and I carefully examine the mouth and likewise the hind part.

3929. Do you open their mouths?—Yes; of every bullock.

3930. What do your imports into Harwich average weekly, now?—About 200 oxen, I should think, and 300 calves.

3931. And how many sheep?—4,000 or 5,000.

3932. Where do they go?—To the London market.

3933. Have you not a sale for store foreign stock at Harwich?—No; not at the present time.

3934. You have had till recently, have you not?—Yes.

3935. How long has that been abandoned?—About a fortnight or three weeks, I think.

3936. For what reason?—Because we could not get any one to buy the things. We have never had many cattle there; only a few fat hogs.

3937. I thought that certain numbers of foreign cattle were sold at Harwich by auction almost every week?—Very few; perhaps four or five; but they principally come from the neighbouring district, from the farmers round about Dovercourt and that direction.

3938. Have you seen cases of Rinderpest besides those two?—Yes.

3939. As a matter of course you would not be able to discover the presence of Rinderpest during the stage of incubation?—No.

3940. However vigilant your inspection, if the animals were sent over here with the disease in a state of incubation, your inspection would not detect it?—No.

3941. (*Professor Spooner.*) You state, I think, that two cases have occurred of the disease called Rinderpest?—Yes.

3942.—Were they in the same cargo?—No; in different cargoes.

3943. Can you name to the Commission the particular dates at which those cases occurred?—One was last Wednesday fortnight, I think. I cannot be sure of the date, but one of the two was some long time back, as far back as August, I should think, and the other was in September.

3944. The first animal that you saw ill you selected out from the others?—Yes.

3945. As being the subject of the disease?—No; it appeared simply unwell, and I was not satisfied.

3946. Was the disease very virulent then; were the symptoms very marked?—No; it was in the first stage of the disease, and it was detained, and I made a post-mortem examination, and then I saw symptoms which confirmed me.

3947. You have stated to the Commissioners that you detained the others, and that they were slaughtered; were they slaughtered immediately?—Yes, some of them.

3948. Did you institute an examination into the carcases of those animals so slaughtered?—Yes, I did.

3949. Did you examine their stomachs and intestines?—Yes.

3950. And did you find in any one of them any symptoms of disease analagous to that which you had found in the one which was slaughtered and recognized as being affected with the disease?—Not the least; they were all perfectly healthy.

3951. And that applies also to the last case?—Yes.

3952. (*Mr. M'Clean.*) Have you a market at Harwich, or are the cattle consigned?—They are consigned to London. We have no market at Harwich now.

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3953. (*Mr. Read.*) Could you suggest any improvement in the mode of carrying on the cattle traffic with foreign countries?—No, I think not. I think that our district is principally infested with this disease from the cattle that come from London, which are brought by the butchers.

3954. Do you think that the cattle are overcrowded in the ships?—No.

3955. Are they perfectly watered and properly fed?—Yes; they are always watered and fed when they come on shore.

3956. In fact you think that the mode of carrying on the cattle traffic is very satisfactory?—Yes, I do.*

3957. (*Professor Spooner.*) I think I understood you to say that those were Dutch cattle which were so affected?—Yes.

The witness withdrew.

Adjourned to to-morrow at 12 o'clock.

Thursday, 19th October 1865.

PRESENT:

Earl Spencer.	Dr. Bence Jones.
Viscount Cranborne.	Dr. Quain.
Dr. Lyon Playfair.	Mr. M'Clean.
Mr. Read.	

EARL SPENCER IN THE CHAIR.

Mr. Robert Field examined.

3958. (*Chairman.*) I believe that you keep a large dairy in London?—Yes; I have a large dairy. I formerly kept about 48 cows.

3959. In what part of London is your cowshed?—No. 3, Robertson Cottages, Westminster.

3960. Have you suffered much from the Cattle Plague?—Yes; I believe that mine was the first shed which was infected in this neighbourhood.

3961. Will you state when you first discovered it?—I did not discover it, to feel in any way sure about it, until a Sunday morning; but I do not know the date.†

3962. What sort of time ago is it; a month?—More than that; it must be over two months ago.

3963. You had heard of the Cattle Plague being in London before you had it in your own shed; had you not?—I had for a month or five weeks before that.

3964. How many cows did you lose?—I had 41. I had one or two affected; and I did not for a moment think that it was this new disease, as its appearance was so much like what we term pleuro-pneumonia, or lung complaint, and I treated them for pleuro-pneumonia. One cow was taken with diarrhœa, and another cow was taken quite in a different way, with constipation. I gave her castor oil and a glister, not thinking that it was this new complaint; but at the same time there is no doubt that there were the first symptoms of it.

3965. Did you call in the inspector of the district?—No.

3966. What became of the remainder of the animals?—When I found that there were several more sickening on the Sunday morning, I had a lot of them slaughtered which were not taken with the disease. I did not send them off the premises, because I had a slaughter-house in the next yard to mine.

3967. What do you believe was the cause of your cows having this disorder?—I can hardly say. I should be sorry to say anything wrong; but my impression is, that I caught it from the slaughter-house being in the next yard to mine.

3968. Were animals which were suffering under disease brought pretty constantly to this slaughter-house to be killed?—Not that I am aware of. I could not say so; but I cannot tell what animals had been taken there.

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3969. Then why should this slaughter-house communicate the disease to your cows?—I cannot tell, except that it is just possible that a person might have sent a cow there to be slaughtered which had the disease; I only go by supposition.

3970. Is this slaughter-house under inspection?—I think that it has now lost its licence.

3971. Do you know why?—I think that it is on account of animals having been slaughtered which had the disease; but I do not speak positively as to whether any were slaughtered there before my cattle caught the disease.

3972. Were you particular in keeping your cowshed clean and well drained and well ventilated?—Yes; I think that I passed most satisfactorily on every inspection which was made of my premises. The district inspector was on my premises only three or four days ago, and he said that he never saw cleaner sheds in his life. I used chloride of lime for five weeks before the disease broke out.

3973. Have you purchased any cows since you lost these?—No.

3974. Do you consider the Government regulations with regard to inspecting the cowsheds satisfactory?—I think so; I think that it is to a man's own benefit to keep his sheds as clean as possible, and we have the inspectors frequently coming and examining them. I never had a complaint made on their inspecting mine. I have always trapped my drains, and have kept them lime-washed out four times in a year.

3975. But I suppose that there are some sheds, and probably a good many, not in so clean a state as yours?—I should be sorry to speak disrespectfully of my neighbours.

3976. Have you any remarks to make upon the Orders of the Privy Council with regard to diseased animals in the metropolis?—No. We find that this disease has taken them in the country as well as in London. I have had an idea that a little way out in the country would be better for cows than for them to be in London, and I have taken a farm over at Wimbledon, but owing to my losing all my

* *See* Appendix B.

† The witness subsequently stated that it was the 20th of August.

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stock I asked the agent, Mr. Scott, to let me forego my agreement, which he kindly did.

3977. It is your opinion that it would be better for cows to be kept in the country rather than in the metropolis ?—I must say so, although the other is to my advantage, because I have a length of lease of my premises; but still I cannot avoid saying that I think that if cows could be kept a short distance from town it would be more beneficial.

3978. (*Dr. Playfair.*) How many of your cattle died ?—Eleven.

3279. And how many were killed ?—30 were killed. Seven of the 48 were sold, as the families went out of town. I had only 41 when the plague first came; 30 of them were slaughtered and sold, and as to 11 of them I gave the Government inspector the receipt which I got from the knackers.

3280. Out of 41 animals the Government got a return of only 11 ?—Yes. I gave the Government inspector the receipt which I got back. I think that it cost me 14*s.* to get those cows taken in.

3281. You have stated that you think that it would be desirable to have dairies out of town; would it not be much more for the health of the cattle if they were able to go out to pasture occasionally ?—I think so.

3982. In the town dairies the cows are often confined for a long time without going into the country at all, are they not ?—They are, from the time that they come in till they go out again.

3983. That may be years ?—If a cow is healthy and well she generally loses her milk in the course of 11 or 12 months, and becomes fat.

3984. Is not the bull often brought to cows in dairy sheds in London ?—Very few of us calve; it answers our purpose better to sell out fat cows, and to bring in fresh cows in their place.

3985. Do you think that the milk would be better if dairies were outside London, instead of being in the close streets ?—I do not think that it would make much difference. I could serve my customers much better by having my cows in London than by having the milk from the country, unless I had the management of that country milk.

3986. Do you serve your customers with milk from the country ?—Yes; from Westbury in Wiltshire.

3987. Is it in good condition ?—It is very good, but it is impossible to make it produce any cream after we get it in London.

3988. It shakes too much ?—Yes; although the milk is quite as good in quality as we get in London, but it will never set to get cream from it.

3989. But you might get cream up in a similar way to the milk which is brought to you ?—Yes; I think that that might be managed if it were not so far from London.

3990. (*Mr. M'Clean.*) How long had the cows been in your shed before the first appearance of the disease ?—I could not say. I do not think that one of them had been a twelvemonth, because the cows were sold out after the families were leaving London.

3991. Had you to pay the expense of sending the diseased animals to the knacker's yard ?—Yes; I paid 14*s.*; that is what they charged me when I got the account back.

3992. (*Mr. Read.*) What did they give you for the dead bodies ?—Nothing.

3993. At what do you estimate your loss ?—My loss is about 750*l.* The cows cost me 900*l.* to place them there, and I got 158*l.* back for the cows which I sent in to be slaughtered.

3994. For the 30 cows ?—For the 30 cows.

3995. You do not suppose that the slaughter-house to which you refer was in very bad condition previously to your loss ?—No; I do not think that it was, any more than other slaughter-houses are.

3996. Have you had many losses from pleuro-pneumonia ?—Yes, I have, years ago; but not lately.

3997. How many animals do you think you have previously lost in a year ?—I only at that time kept eight cows, and I lost nine in 13 weeks with pleuro-pneumonia.

3998. I suppose you think that it is impossible to keep cows in a healthy state for a very long time in our London cowhouses ?—I do not know; mine go out fat and well after being a twelvemonth in the shed, and over that time.

3999. But if there is a disease in the country, do you not generally come in for it ?—Yes; we generally suffer from the epidemic of the foot and mouth disease.

4000. But you do not often lose cattle from that, do you ?—It has been rather fatal in the last few years.

4001. You have mentioned that two or three of your cows showed different symptoms at the beginning of the disease ?—Very different.

4002. One suffered from constipation, and another from diarrhœa ?—Yes.

4003. Had the one with diarrhœa shown any previous symptoms before she began to scour ?—She refused her grains a few hours before she began to scour.

4004. What sort of cows do you generally keep; foreign cows ?—No; I never had but one foreign cow in the shed at that time; that was a Dutch heifer; and she stood as long as any cow in the yard. I do not think that I had bought any cow for six weeks before this disease occurred.

4005. Yours I suppose are chiefly short-horned animals ?—Yes; from Yorkshire, and that part of the country, I have bought very excellent cows.

4006. What was the usual price at which they would come in ?—I have given 22*l.*, 23*l.*, 24*l.*, and 25*l.*; sometimes 20*l.*

4007. Where do you generally buy your cows ?—I have generally bought mine of Mr. John Lowe and another man, Mr. Johnson, at the Metropolitan Market. I have bought a good many of Mr. Miller.

4008. (*Chairman.*) Did you purchase any cows recently before the outbreak ?—No; not for five or six weeks. I think that I might venture to say six weeks. The last cow I bought on June 19th.

4009. How long do you generally keep a cow in your cowshed ?—If she will milk on, I keep her for a twelvemonth.

4010. And then you sell her ?—Yes; as a fat cow.

4011. You are continually changing your cows ?—Yes. We perhaps should require to purchase two or three when we send two or three out, or something like that.

4012. What becomes of your manure ?—A man of the name of Lake has fetched it away every morning from my place, till lately. It goes down, I think, into Kent.

4013. What has happened with the manure since the outbreak of the disease in the metropolis ?—They fetched all mine away in the manner which I have mentioned up to the time when the outbreak occurred; and what little I make from my horses they fetch perhaps once a week or so.

4014. Do you mean that the carting away of manure from the cowsheds in London has been practically stopped since the outbreak ?—I think not.

4015. Are no means taken to disinfect it ?—I have disinfected it since the outbreak. I put chloride of lime on it; but I do not know of anything more that has been done. I cannot tell what may have been done in other counties.

4016. (*Viscount Cranborne.*) Do you always purchase your cows in the Metropolitan Market ?—Yes; I think I may venture to say that I have done so in the last two years.

4017. Have you ever purchased direct from farmers in the country ?—Some years back I purchased some from Reading in Berkshire.

4018. Did you go on for any length of time upon that system ?—I did not get the class of cow which I wanted.

4019. The animals were not so good as what you got in the Metropolitan Market ?—They were not.

4020. I suppose that otherwise there was no diffi-

culty in getting them?—They became very scarce, and that is why I discontinued that practice.

4021. How were they brought up to you; by rail?—Yes.

4022. (*Chairman.*) Is there anything else to which you wish to call the attention of the Commission?—No; I have only come to speak the truth upon any question which might put to me.

4023. (*Viscount Cranborne.*) Have you had anything to do with the inspectors?—Very little.

4024. What inspectors have you had to do with?—Mr. Crowe is the district inspector for me.

4025. Is he appointed by the Government or by the magistrates?—By the magistrates, I think.

4026. What district is yours?—Mine is St. Margaret's.

4027. Do you know whether Mr. Crowe is a veterinary surgeon?—No, I think not.

4028. What is he by trade?—I cannot say; I do not know what his trade is.

4029. But it is not that of a veterinary surgeon?—No. The Government inspector is no doubt a veterinary surgeon. Mr. Crowe called on me, I think, about two or three days before the outbreak came, and was remarking how clean and nice the cattle were kept, and he said that he hoped that they would remain so.

4030. Do you know whether he is a farmer or a tradesman?—He is not a farmer. I should think that he is something of a tradesman, but what I do not know. His brother I know is a broker, but I do do not know what he is himself.

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4031. Has the Government inspector ever been to your shed?—Yes.

3032. He is a veterinary surgeon?—Yes. I showed him the cows which were remaining. He said, "You "have done perfectly right; you have not sent them "off the place." He said, "There are four cows "there which you may have slaughtered." I said, "There are four cows here which I have had slaughtered this morning." Mr. Barnard Holt was on my premises at the time; and I said, "I should wish "Mr. Barnard Holt to inspect these bodies, to see "whether they are fit to go to market; if not they "shall not leave the slaughter-house." When they left my place I could not see any signs of their being unwell, but I was afraid that they would be so, and I had them slaughtered. Mr. Barnard Holt went and examined them, and did not in anyway whatever condemn them.

4033. No inspector has slaughtered your cows without your consent?—No. He left instructions that such and such a cow must not leave the sheds without being slaughtered on the premises, and I had that done, and had lime put over them, and had them sent away to the knackers.

4034. (*Mr. Read.*) How long after the disease first appeared did you send for the inspector?—I did not send for him at all.

4035. But he came?—Yes.

The witness withdrew.

MR. WILLIAM JAMES BONSER and MR. ROBERT CALCUTT examined.

Mr. W. J. Bonser and Mr. R. Calcutt.

4036. (*Chairman.*) (*To Mr. Calcutt.*) What are you?—I am a butcher by trade.

4037. (*To Mr. Bonser.*) What are you?—I am a commission meat salesman.

4038. (*Mr. M'Clean.*) The principal point on which we wish to obtain your evidence is with reference to the supply of London with dead meat from the country. How far do you consider it practicable that there should be no slaughtering done in London, but that the meat should come from Scotland, Norfolk, and different places?—I think that it would be altogether impracticable in the hot weather.

4039. At other seasons would it be practicable?—It might be practicable at other seasons; but I think that then it would be attended with great inconvenience.

4040. How would you regulate the supply of dead meat if it all came dead from every part?—I think that it could not be done. The meat which is now killed in London supplies the deficiency of that which is sent up dead from the country; but if all were sent up dead I think that there would be nothing to supply the deficiency.

4041. (*Chairman.*) How do you ordinarily conduct your business?—We every morning receive consignments of meat from all parts of this country, and also from Scotland, and a good deal from abroad. We do not know beforehand what will come; we cannot tell till the morning. Occasionally we receive an advice on the previous day, but not always. That meat is sold at the market price of the day, and the account sales are returned the same day.

4042. Is yours entirely a wholesale business?—Entirely.

4043. Do you not give notice according to the requirements of the butchers in the west end, or in other parts of London, of the amount of meat which you require from the country?—We neither give notice nor receive notice of what is coming.

4044. Has your business been largely increasing of late years?—Very largely.

4045. Where are the animals slaughtered which come up from the country?—The persons who send them up have them slaughtered on their own premises, I should say, in almost every instance.

4046. Are those premises in a town or on the farm where the cattle are grazed?—Principally in towns. Sometimes the farmer has his cattle slaughtered, and sent up from his farm by railway, but by far the larger proportion come from towns.

4047. In those instances which you state of farmers killing their own cattle, in what part of the country do the farmers reside?—In all parts of the country. The quantity coming in that way is a very small proportion compared with that which is sent by dealers. From Aberdeen very large quantities come; frequently 100 tons of meat in a day.

4048. Could not that system be extended of the farmers killing their own cattle and sending them up to you?—A great many have tried it, and have not found it answer, and they have gone back to the system of selling their cattle to dealers.

4049. Why does not it answer?—I can scarcely say why, but I believe that it is principally from their not being so well able to dispose of the offal as a person in the trade would, and from its not being required in the country as it is in large towns. I should fancy that that is one of the principal reasons.

4050. Does the meat arrive in London from Scotland in good condition?—In very good condition, considering the distance; but sometimes, in summer, it is almost useless.

4051. How is it in winter?—In winter it comes in very good condition. It comes in better condition from Scotland than from many places at a shorter distance; that is, I should say, from the cold temperature. The meat keeps much better, having been killed in a cold temperature, than when it has been killed in a warm temperature.

4052. Have you a large trade from the butchers in the country towns?—It is principally the butchers who send to us.

4053. Supposing that a regulation was put into force in the metropolis which prevented any animals leaving the metropolis alive, confining the market entirely to butchers' stock; what effect would that have on the market?—I suppose that that would be during the present emergency?

4054. Exactly so.—I do not think that it would affect at all the supply of butchers' meat in the

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market. I think that it would probably tend to prevent the spread of the disease.

4055. You do not think that it would create any difficulty in the Metropolitan Market?—I am not perfectly acquainted with the Metropolitan Market myself, but I believe that is the state of things now; there are very few, except butchers' animals, which are sent to that market, on account of the dread of infection. I have understood that to be the case, but I cannot speak of my own knowledge.

4056. We are told that since the last Order in Council has been issued animals sent to the Metropolitan Market for slaughter have been bought by butchers, and taken to Birmingham. Would the checking of that have any effect upon your trade?—It might produce some inconvenience, but I think nothing to be compared to the injury which is now sustained by the disease.

4057. Then in your opinion it would be desirable to confine the Metropolitan Market to animals sent there for slaughter?—Yes, as far as my own opinion goes; but I am not in a position to speak with any authority upon a point of that kind, because I do not attend that market.

4058. We have been told that it is now somewhat difficult to obtain proof that the animal does not leave the market for other purposes. Do you consider that it would be necessary to alter the regulation, as to the slaughter-houses in the metropolis, in order fully to carry out that prohibition?—I do not see in what way any regulations could be made to carry that out.

4059. Can you state at all the number of slaughter-houses which there are in the metropolis?—Only in the city. I can give you the number in the city from the report by Dr. Letheby, which probably the Commissioners have seen; there are 58 in the city of London.

4060. But throughout the metropolis there are a much larger number?—Yes; but I could not state the number.

4061. Would there be any great inconvenience in limiting to some extent the number of slaughter-houses in the metropolis?—I think that there is considerable inconvenience already experienced from the limits which have been previously placed upon them, and that in consequence of the numbers being less more business is done at each, and that there is consequently more crowding and less cleanliness. I am sure that that is the case in the city.

4062. Would it be possible to inspect all the slaughter-houses in the metropolis to such an extent that you could actually prove that the animals sold in the market came there and were slaughtered there?—I do not see how that could be carried out.

4063. What effect would an order such as I have described have on the country markets; that is to say, forbidding animals which come to the market leaving the town alive?—I cannot see that it would have any effect upon the country markets.

4064. A suggestion has been made to us that foreign cattle should not leave the place of their landing, but that a market should be created there for them, and that they should be there sold and slaughtered upon that spot; do you think that that would be practicable?—I think that it would be very injurious. We find very great inconvenience arising from it to the extent to which it is now carried out. In case of 100 cattle being kept there by the inspector who may have reason to suppose them to be diseased, they are obliged to be slaughtered very badly for want of proper conveniences; there is no proper place for keeping them, and they must all be slaughtered together, and brought into the market at unseasonable times, and at very great disadvantage. The loss to the senders is very heavy, and that of course deters their sending them.

4065. If greater conveniences were made at the landing places for slaughter, would that be the case?—I do not think that there can be such conveniences as are necessary. These animals are not perhaps required all in one day.

4066. How long are animals generally kept from the time when they are sold in the market till the time of their slaughter?—Generally a few days.

4067. They are always kept a certain number of hours, in order for them to cool, are they not?—Sometimes it is done so, and sometimes they are killed immediately; but a butcher prefers keeping them 24 hours.

4068. Where are they generally kept for these 24 hours?—The butchers have their places either adjoining their slaughter-houses or somewhere in the neighbourhood. There is one question which you have asked, I think, in reference to the possibility of preventing animals from the Metropolitan Market being taken again into the country. I think that a regulation has lately been made that the hair should be cut off the tails of all animals sold there, and it would be very easy to ascertain whether any of them were afterwards taken to the railways.

4069. And the railway authorities might have directions not to allow them to pass?—They might perhaps have those directions. It would be easy to ascertain whether they were taken there or not.

4070. As I understand now, in the market all the animals sold there are marked?—I have understood that for the last few weeks every animal has been marked before it was taken away. I have understood that that is now the regulation, but it is a regulation which I imagine could be easily made.

4071. And you think that that would be desirable, in order to check the disorder?—It would prevent the possibility of their being taken without its being known.

4072. (*Mr. Read.*) Would there be any practical difficulty in having an order carried out that no live cattle whatever should leave the metropolis?—I should imagine not.

4073. That is to say, if it were made penal for any owner to drive or convey cattle from the metropolis?—There would be no difficulty if it were carried out for a time; it would perhaps be productive of great difficulty if it were a permanent regulation.

4074. I believe that there are from 1,500 to 2,000 head of bullocks a week which leave the Metropolitan Market to be slaughtered in the provinces. It is your opinion that, we will say for the next month, or say during the cool weather in the autumn, no great difficulty would be experienced in killing these animals and sending that meat away dead?—It would not be possible to send it into the country dead. The effect of such a regulation as you have mentioned, I think, would be to prevent the animals being sent to the cattle market, in the first place. A country butcher can come to London, and buy cattle, and take home; but he could not buy it slaughtered in London; the appearance of the meat would be altered.

4075. Then how does so much dead meat come from Aberdeen?—Because the London buyers are accustomed to it. They pay much less attention to the appearance of the meat, as they know that it is good; but the country buyers do not do so.

4076. Then it would be simply a matter of prejudice?—Yes; except that the meat killed in Scotland comes in infinitely better condition than meat killed in London, and going into the country, on account of the different atmosphere in which it is killed.

4077. That would not be so generally in the autumn, would it?—In any time of the year. The meat killed in London is very different in appearance from that killed in the country.

4078. Why should the meat killed in London be worse handled or prepared than that killed in Norfolk?—It would not be worse prepared, but would be killed in a different atmosphere, and would deteriorate much more rapidly. There is another reason, namely, that the beasts brought to London are in a different state of health, from having been driven.

4079. I think you stated that farmers who had

tried to kill cattle on their farms had discontinued that practice?—I know several instances of it.

4080. Would not that generally arise from the want of conveniences?—I cannot say the reason; but I only know that they have done so, very much to my surprise.

4081. You have meat, you say, from abroad. Where from?—From France, Holland, and Hamburg.

4082. At what time of the year do you receive it?—All through the winter, and as far into the spring as the weather is sufficiently cold. They are now just commencing it again.

4083. Does it arrive in pretty good condition?—Yes; in good weather.

4084. You mean by good weather, cold weather?—Yes. From Hamburg we have dead meat almost every day through the winter.

4085. Is it an increasing trade?—It is very much increasing.

4086. What would be the relative expense of sending a carcase of beef from Hamburg, as compared with sending it alive?—The expense of sending a bullock alive is 1*l.* from Hamburg; and the expense of sending a dead bullock is, I think, about 8*s.*

4087. And of course the meat in cold weather would run much less risk of damage from the voyage than the live bullock would?—Very much less; they always send it dead when they can.

4088. Surely, if they can send it all that way dead at a smaller cost, the country people might be satisfied with having dead meat from the metropolis, might they not?—Perhaps they ought to be, but hitherto they have not been.

4089. (*Dr. Playfair.*) How long does a steamer generally take in coming from Hamburg?—About 40 to 48 hours.

4090. (*Dr. Quain.*) Has the disease had any influence on the class of meat which you now receive; is it different from what you received before the disease occurred; in other words, do you receive any meat which you suspect to be diseased?—I should think that there is a great deal of meat sent up in the incipient stages of disease. We frequently receive meat with the certificate of the inspector, a veterinary surgeon, in the country, that it is fit for human food. There is no doubt that it has not been well, and that there has been something amiss with it, and it has been slaughtered and sent up with that certificate that it is not unwholesome.

4091. Would your technical knowledge enable you at all to say that it is diseased?—We could say that it was not healthy, but we could not say whether it had had this Cattle Plague or any other disease. Sometimes there are indications of particular diseases.

4092. Can you give any opinion upon the meat which comes to you with the certificate of a veterinary surgeon?—No. I cannot say anything particular about this disease. I have not seen an instance of it myself.

4093. You have not heard that any ill effects have arisen from that meat being sold?—No.

4094. (*Viscount Cranborne.*) How long a period do you think elapses between the time when, in this weather, a beast is slaughtered in Hamburg and the time when it reaches the consumer?—I should think that it would be killed about 24 hours before it is sent, and that it would be about 48 hours on the passage, and it may be kept for 12 or 24 hours more in cold weather. It is very cold in Hamburg, and therefore the meat would keep longer if it were killed there than if killed in some other places.

4095. If the importation of live cattle were prohibited altogether, do you think that in this cold weather the same amount of meat would reach this country dead?—I should scarcely think so; when it comes in dead it must be sold.

4096. There is more uncertainty in getting a good price?—Yes.

4097. Are there large slaughter-houses at Hamburg?—There is a very large public slaughter-house; I do not know what others there may be.

4098. Do you know what inspection there is before the foreign cattle leave the port?—I believe that at all the ports there is a very good inspection; but I cannot speak of it from my own knowledge.

4099. Do you think that if it was considered advantageous to prohibit entirely the importation of live cattle from countries such as Russia it would be possible that a dead meat market could be carried on?—Not from Russia.

4100. It would be too far?—Yes.

4101. (*Dr. Playfair.*) Is there at this moment any traffic from Russia, except an experimental herd? As far as I can learn, only one cargo has been brought.

4102. From Hungary, is there not a considerable traffic?—I should think so; they would come overland. Great numbers of cattle now come through Holland by way of Magdeburg, and are shipped at Rotterdam.

4103. Considering that it takes four days to come from Galicia here, would that be too long for dead meat to come from the borders of Galicia?—It would very much depend upon the weather, and the way in which it was carried. Although the meat coming from Hamburg is in perfectly good condition for use, it is very much disfigured; it does not come in condition to make the highest price, or to be kept for a length of time afterwards.

4104. (*Viscount Cranborne.*) In what way is it disfigured?—It is stained, and does not look bright.

4105. But is that any indication of a deterioration of quality?—No; the quality is not deteriorated, but the value of the meat for sale is.

4106. Do you mean to say that the purchasers in England are so foolish that they have not discovered that those signs mean nothing?—Perhaps Mr. Calcutt can speak upon that point.

Mr. Calcutt.—Of course meat coming from abroad or anywhere else, having a fresh appearance, although being of the same quality, would make more than a corresponding side which had been what we term muddled; that is to say, discoloured.

4107. Upon what does that curious phenomenon turn; is it the folly of cooks?—No.

4108. Then why do people attach to these signs that which they really do not bear?—When we go into the market, we find that sheep which have been badly packed will not make so much by perhaps a halfpenny a pound; the salesman knows that he cannot hold them, and therefore he is inclined to take a lower bid.

4109. Because it is obvious that they must be sold?—Yes; for one thing; and in the next place they are not so good to the eye, and in many shops they could not be hung up for more than one day.

4110. Are these marks the signs of incipient decomposition, or are the animals not sold so well because they are not so pleasing to the eye?—It is simply because they are not so pleasing to the eye; you cannot call it a species of decomposition.

4111. (*Chairman.*) (*To Mr. Bonser.*) Are there any other foreign ports from which you get dead meat besides Hamburg?—We receive French meat by way of Jersey; we receive meat from Boulogne and Ostend.

4112. Do you receive large quantities?—Yes; large quantities in the season.

4113. What do you call the season?—The winter; in the winter it comes dead, and in the summer it comes alive.

4114. In the next few months are you expecting dead meat from these foreign ports?—As soon as the weather gets a little colder they will send dead meat.

4115. (*Viscount Cranborne.*) Do you receive dead meat from Rotterdam?—We are receiving it from there two or three times a week.

4116. (*Chairman.*) Then the importation of live stock in the next two or three months would not be so very important for the country?—It is such a very large branch of the trade that I should not like to say that it would not be important.

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4117. Can you give any idea of the proportion of live and dead meat which will come to England in the next two months?—No; because I have no connexion with the live cattle trade.

4118. Does your principal business begin when the cold weather begins?—No; we have business all the year round; but the supplies are larger in the cold weather. Perhaps I may be allowed to say that I think that the dead meat trade would be very much encouraged if greater facilities could be afforded at the Custom House; there is often a very great delay there. I do not know whether that is possible.

4119. What delays occur there, and what remedies would you apply?—In the case of a Hamburg boat arriving at 11 o'clock on Sunday morning the meat cannot be landed; the boat is put off into the stream; and on the Monday morning, when the Custom House officers come (I think that it is at 7 o'clock, but I am not quite certain), the meat on board that boat has to be brought in lighters, and it does not get into the market until perhaps 10 or 11 o'clock; that is 24 hours after arrival.

4120. (*Viscount Cranborne.*) There is nothing which could possibly be contraband in dead meat, is there?—They appear to fear it. I have been at the Custom House, and have seen the officials about it, but they do not seem as if they could afford any greater facilities.

4121. (*Mr. Read.*) What have the Custom House officers done in the matter?—They will allow the meat to be landed up to 10 o'clock on Sunday morning; but if it is after that they will not allow it. They agreed some time ago to have it landed at daylight by paying the expenses of the officers.

4122. (*Viscount Cranborne.*) How does your meat generally come; in sacks or in boxes?—Generally in a sack.

4123. You could not conveniently import tobacco with it, could you?—I am not aware whether it has been imported with it.

4124. (*Chairman.*) Is there the same trade in dead meat at the northern ports, such as Hull and Liverpool?—Yes; sometimes we have dead meat by way of Hull instead of coming to London.

4125. I suppose you would be of opinion that if it was compulsory to slaughter all the animals on landing the dead meat trade would be increased?—I think it would be probably beneficial to myself, but I think that it would be a very extreme measure to take.

4126. And not practicable even for the winter months?—I think not.

4127. (*Mr. Read.*) Intensely cold weather is rather injurious to meat than otherwise, is it not?—A very severe frost is so. Cold, clear weather is the most suitable.

4128. (*Chairman.*) (*To Mr. Calcutt.*) I believe that you are a butcher in a large way of business?—I will not say large, but moderate, or more than moderate.

4129. In what part of London does your business lie?—In Westminster.

4130. Your trade, therefore, is with the West End?—With the West End and with Westminster, Dean's Yard, and all round the immediate neighbourhood.

4131. Will you state how you conduct your business with regard to the purchase of stock?—During the winter months the greater portion of my meat is bought dead, that is to say, in Newgate Market. With regard to the summer months, I never miss a week in going to the Islington Market, and I there buy a portion alive and a portion dead. I attend every morning, not missing six mornings throughout the year.

4132. Have you a private slaughter-house of your own?—I kill at a neighbour's. I lost my licence in the second year that the licensing came into effect.

4133. When you kill at this private slaughter-house, have you to drive your animals some distance through the metropolis?—They are driven from the market to the slaughter-house, within the regulated hours. My animals are always home by 9 o'clock in the morning.

4134. How long have you to keep them at this slaughter-house before you slaughter them, from the time at which you purchase them in the market?—It does not average three days.

4135. Have you sheds?—I have sheds for the oxen, and the sheep go into the park, or into Dean's Yard on the grass.

4136. Have you considered the subject of stopping the movement of cattle, and not allowing the cattle to leave the metropolis alive when once they arrive there?—I think that within the last few years a trade has sprung up to a great degree of butchers coming to London week after week to buy stock to send into the country to kill. I myself know several men from Oxford who come up invariably every week to buy oxen, and to take them down.

4137. What would be the effect of this measure upon those parties?—I cannot tell you that; there is no doubt that it would be an injury to them.

4138. Do you purchase much foreign dead meat?—No; it does not suit me.

4139. Where is the foreign meat principally sold?—It is distributed all over the market.

4140. Why does not it suit you?—The quality would not suit me. The principal part of our supplies comes from Scotland for four months after Christmas. I should say that perhaps 19 parts out of 20 of all that I sell come from Scotland for four months after Christmas.

4141. Do you mean animals slaughtered on the farms where they have been grazed or reared?—I cannot speak positively as to it, but I should say that the principal part of them comes from Aberdeen.

4142. Do you consider the slaughter-houses in the metropolis to be in a good condition?—Yes, very good; and I should say that at the present time there have been several persons who have been opposed for not keeping them clean, and not attending to them, and for that reason I know that the butchers as a class are very zealous to keep them clean, and to do everything which they can to meet the officers, so that the officers or the neighbours should not have cause of complaint; they are more afraid of the neighbours, in case of an opposition, because in all courts now, if an opposition is got up by the neighbours, it tells so much against them.

4143. Would it be possible for a limited time to restrict the number of these slaughter-houses, so as to bring them more easily under inspection?—I do not see that you would do any good by it.

4144. About what number of slaughter-houses are there in the metropolitan district?—I cannot give you the number; no register is kept which is open to the public.

4145. There must be over 700 or 800?—More than that; I think that the licensing extends to a radius of six or seven miles.

4146. Supposing that an order forbidding animals alive to leave London were issued, what proof would you be able to have that they were not sent into the country, but were slaughtered in the different slaughter-houses in the metropolis?—You could have no proof that they would not be sent away; but I think that instead of their coming to London they would be drifted into the country through other channels. I do not think that you can ever make the country people consume meat which has been killed in London, on account of their prejudices.

4147. Would they not be able to get a sufficient supply in the country for their wants without coming to the metropolis at all?—In many times of the year they would not.

4148. But in winter, for the next three months, do you not think that they would get a sufficient supply without coming to the metropolis?—I could not give an answer to that question.

4149. Can you state whether the trade in the country from the metropolis is greater in the winter

than in the summer ?—I cannot, of my own knowledge.

4150. (*Viscount Cranborne.*) What is the cause of the prejudice which is entertained against meat which is killed in London ?—I cannot tell you the cause, but undoubtedly there is a prejudice, and a prejudice which you could not get over.

4151. Do you mean to say that the private consumer in the country would recognise whether meat had been killed in the country or in London ?—No doubt he could tell. Our customers here invariably leave everything to us, and so long as we can give them a good article, and can suit their tastes, we have done our duty. We are not called upon to know whether the meat is particularly good to the eye; whereas in the country it would be the reverse.

4152. You mean that the consumers in the country are more exacting ?—Yes; they see the thing; whereas here they do not. I do not consider that the actual consumer in the country would buy meat killed in London which had been hung up in a shop for public sale.

4153. (*Mr. Read.*) Are not the foreign cattle of sufficiently good quality for your trade ?—No.

4154. You prefer good English bullocks ?—I prefer good Scotch bullocks to anything. My opinion goes so far as to say that no one so well as a Scotchman knows how to produce a bullock for the London trade.

4155. (*Dr. Playfair.*) How many months do you slaughter for yourself in London ?—About seven months, upon the average.

4156. Between what dates ?—Commencing in May, and continuing on up to the end of November.

4157. You find that you can get dead meat from Scotland in the other months ?—Yes, but not in sufficient quantity for the demand; with regard to the Scotch meat, we have to pay a higher price for it than we should for any other.

4158. That is on account of its excellence ?—On account of the quality of it.

4159. (*Mr. Read.*) Do they send you up whole carcases, or hind quarters mostly ?—A great many animals are sent up in sides, packed in a single cloth. They come out as clean as if they came out of our slaughter-house.

4160. Do you know why the Government contractors generally buy foreign stock ?—Because it is cheaper.

4161. Not because it is better ?—No.

4162. Nor because the animals are generally healthier ?—No. Generally the foreign stock which is now brought into our market has trebled itself within the last three years.

Mr. Bonser.—And the quality is wonderfully improved.

Mr. Calcutt.—The quality is altogether different.

4163. Is there any great quantity of fine big old beasts ?—Yes. A friend of mine last Monday fortnight paid 84*l.* for two foreign oxen.

4164. Still is there not a great deal of coarse heavy meat about them ?—Yes; but it goes for different purposes.

4165. (*Chairman.*) (*To Mr. Bonser.*) In considering the subject of the Rinderpest in England, have you thought of any effectual remedy for stopping its spread ?—I cannot say that I have, for I am not at all practically acquainted with the disease.

4166. (*To Mr. Calcutt.*) Have you thought of any remedy for it ?—I have never seen an instance of the disease in a live animal.

4167. (*To Mr. Bonser.*) Is there anything else to which you wish to call our attention ?—I think not, unless merely to mention the great increase in the importation of foreign cattle in the last few years, and the great improvement which has taken place in them, and the very ill effects which would arise from any check given to that importation.

4168. (*Dr. Playfair.*) Are you of opinion that this disease has been of foreign importation ?—I am decidedly of opinion that it has not.

4169. Upon what do you ground that opinion ?—From nearly all the foreign cattle, as far as I have seen, being healthy. The disease, I believe, is not known in the parts from which we received the foreign cattle.

4170. Did not you say that a considerable number of foreign cattle were imported from Hungary ?—No; I did not say so. I understand that they are brought across overland; but I do not know.

4171. Are you aware that cattle of the Hungarian breed are brought almost every week to the Metropolitan Market ?—No; because I do not attend the Metropolitan Market.

4172. Would you not qualify your statement when you know that the disease is in Hungary at the present time ?—As far as I can learn, the foreign cattle which have been brought here have not shown any signs of that disease, and it has broken out in so many places to which I believe that foreign cattle have not had access that I think it must have originated at home.

4173. Would you approve of an order preventing the importation of any foreign cattle from infected districts ?—I am scarcely prepared to answer that question. I think that it must entirely depend upon the extent to which the disease is prevailing there, and the amount of danger.

4174. Are you aware that at the present moment France has prohibited dead meat from being exported from England into that country ?—I was not aware of it.

4175. Would you extend the prohibition of the importation of dead meat into this country to any infected district abroad ?—Certainly not.

4176. (*Mr. Read.*) Has the trade in dead meat from abroad very much increased lately ?—Very much indeed.

4177. And in your opinion is it likely to increase ?—I have no doubt that it will increase very rapidly every year, if it is not checked; they will always send dead meat if they can, when the weather will allow them, because the expense is less, and the risk is less.

4178. (*Chairman.*) (*To Mr. Calcutt.*) Are there any additional remarks which you wish to make to the Commission ?—No.

The witnesses withdrew.

Adjourned to to-morrow at 10 o'clock.

Friday, 20th October 1865.

PRESENT :

EARL SPENCER.
DR. LYON PLAYFAIR.
MR. M'CLEAN.

EARL SPENCER IN THE CHAIR.

W. Cawkwell, Esq. and J. Allport, Esq.

20 Oct. 1865.

WILLIAM CAWKWELL Esq. and JAMES ALLPORT Esq. examined.

4179. (*Chairman.*) (*To Mr. Cawkwell.*) You are traffic manager, I believe, of the London and North-western Railway ?—I am.

4180. Can you state the quantity of stock which travels along your line ?—I have a return for the month of September of the present year. I have the number of cattle, pigs, and everything. The number of cattle carried was 28,756 for the month, calves 2,080, pigs 25,307, and sheep 169,418; and we carried 1,496 horses.

4181. Is that traffic principally to London, or is it from London to the country as well ?—Taking the same month, the quantity of cattle received in London was 1,589 waggon loads. I have not the pigs and sheep for London. Those waggon loads would average about seven or eight head of cattle per waggon; probably seven would be the nearest number.

4182. (*Dr. Playfair.*) That is about 11,000 ?—Yes. We sent from London for the same month 400 loads; that would be about 2,800 head of cattle.

4183. (*Chairman.*) Then there is a large balance still ?—No doubt there is a very large consumption in London.

4184. The remainder of the traffic is along your line from one local station to another ?—The remainder is from town to town upon the line. I just had got out last evening one or two of the principal places. I have Manchester, for instance. In the month of September we received at Manchester 1,273 loads; that multiplied by 7 will give the amount of cattle in the same way. We sent from Manchester 154 waggon loads. At Liverpool we received 600 waggon loads, and we despatched from there 1,407 waggon loads. I may explain that at Liverpool the principal part of the cattle comes by sea from Ireland, so that we do not bring so much in as we take out. At Birmingham we received 570 waggon loads, and sent away 60 waggon loads; therefore the remainder was consumed in Birmingham. At Wolverhampton we received 450 waggon loads, and sent away 90. I have looked up some old reports; I could not lay my hands on one of very recent date; but it shows the stations to and from which we send cattle on our line. It is a very extensive trade upon our line; it comprises all our principal stations.

4185. Have you any means of distinguishing between lean stock and butchers' stock which travel along your line ?—No; except principally by the places to which they are sent; for instance, the Irish cattle are principally lean cattle, which are sent to the Midland counties and to Herefordshire and some other places in that neighbourhood, where the cattle are sent to be fed, and afterwards they are forwarded from there to London and other markets as fat cattle; but we also bring a very large amount of fat cattle from Ireland to London for the London market.

4186. At what season of the year does the larger quantity of the Irish cattle come to England ?—The fat cattle principally come in the winter; the lean cattle, I fancy, come in the latter part of the summer ?

4187. Then the great trade in lean cattle is now principally over ?—I think that it is.

4188. At what time of the year will it recommence ?—I cannot tell you that exactly. I could inform you; but I think that there is also a spring trade.

Mr. Allport.—Very little. The lean cattle principally come from Ireland in the summer time for the autumn pastures, to fatten up for the London and other large markets in the winter; they generally come during the summer time.

Mr. Cawkwell.—The main trade is in the latter part of the summer.

4189. Is September an average month on the London and North-western Railway ?—I can send you an average month. I have no documents here at present.

4190. Is it a fair sample of an average month during the year ?—I have no return here showing the Irish cattle separately. I will furnish the Commissioners with a statement of an average month.

4191. With regard to stock coming from Scotland, have you a large quantity of live stock travelling along your line from Scotland ?—We have. I am afraid that I have not the Scotch traffic separately, but I will send it also to the Commissioners. I have some returns here for 1854 and 1855, but probably they would not represent what is in existence now.

4192. I suppose that there is no other place on your line, except Liverpool, where the Irish cattle come ?—They come to Holyhead principally now.

4193. What number come to Holyhead ?—We receive both by Holyhead and by Liverpool.

4194. (*Dr. Playfair.*) Would the month of September be a fair average of the whole cattle traffic upon the London and North-western line ?—Yes. I can also give the Commissioners the quantities from Wales. We have a cattle traffic from Wales.

4195. (*Chairman.*) I suppose that you have not a large traffic in foreign cattle along your line ?—A considerable quantity of foreign cattle now comes to go down our line. Taking the month of September for 1863 and 1865, it has just doubled. In September 1863 we sent 202 loads of cattle, and in September 1865 we sent 400 loads.

4196. Are they principally store beasts or are they fat beasts ?—They are fat beasts; and we are now sending them as far as Birmingham and Wolverhampton, which is quite a new trade in cattle.

4197. From London ?—Yes; formerly the London cattle only went the shorter distances.

4198. Do foreign cattle go to other places besides Birmingham and Wolverhampton ?—Yes. I merely mention those places as the greatest distance that we send them to.

4199. Is there a large trade between the butchers in London and the butchers at Birmingham in live cattle ?—The Birmingham butchers buy in the London market, and they take the cattle down. That trade has very much increased recently.

4200. We have been told that the trade in dead meat has increased lately throughout the kingdom. Can you give us any facts upon that point ?—I do not think that it has; but I will look that matter up, with pleasure, and will let the Commissioners know. I could not tell without examining our books; but I will do so. We carry dead meat from many places on our own line from the Midland Counties and also from Scotland. There is a considerable trade in dead meat from Scotland to London; but I am not aware that that has increased much recently.

4201. How is that trade conducted ?—The beasts are killed in various parts of Scotland, and then sent up as dead meat, consigned to the sellers in London;

men who act as brokers; and they sell the dead meat in the market for the consignors.*

4202. Have you any special mode of conveying that meat?—It is conveyed principally in hampers and cloths.

4203. By ordinary train or by luggage train?—By luggage train generally; nearly altogether by luggage train; in fact I am not aware of any coming by passenger train to any extent.

4204. At what time of the year is that trade principally carried on?—All the year round.

4205. Does it increase at all in the winter?—I do not think that there is any special increase of it in the winter.

4206. In your opinion, from your knowledge of the traffic in butchers' meat and in live stock in the country, would there be any difficulty, supposing that a regulation was passed prohibiting for a time cattle when they once arrived at a market town leaving that town alive?—I think that it would very much cripple the trade. In the first place, it would require special arrangements on the part of the butchers who kill the meat; they would have to provide hampers and cloths, at a very great expense, except they were going to do it continuously; and when the meat got to London of course it must all be sold immediately, they could not let it stand over from one market to another, as they now do with live cattle. I think that they would be entirely in the hands of the brokers and parties in London, who might offer them what price they chose for their meat, and that they would be obliged to sell. I do not think that they would be inclined to go far in that trade.

4207. I do not mean that the meat should be killed where it was reared or grazed, but that animals should be sent alive to the market, and should not leave it alive?—That has not been the custom, and I do not think that you would get them to buy dead meat in that way; it would require the same provision to be made by these people who now come up and buy the cattle and slaughter them at their own places; they would have to purchase hampers and cloths and every necessary for conducting the business, and as a mere temporary thing I do not think that they would be induced to do it.

4208. As far as the railway management goes, there would be no difficulty in conveying a greater quantity of dead meat?—No; we could convey it well enough.

4209. (*Dr. Playfair.*) What steps previously to the outbreak of this plague did you take to keep the trucks in a clean and good condition?—We always cleaned our trucks; we had them washed and cleaned out.

4210. After each journey?—Not always after each journey; but we had them kept reasonably clean. But since this Cattle Plague made its appearance we have issued instructions. Probably the Commissioners have had copies of those instructions already laid before them?

4211. I do not think that we have?—These instructions were issued at two different dates. The one set of instructions applies generally to cattle, and the other has applied more recently, in accordance with same recommendations of this Commission, to sheep and other kinds of animals (*handing in the same*).*

4212. What steps previously to the breaking out of this plague did you take in feeding and giving drink to the cattle as they went along the line?—We offered to unload the cattle and give them drink at any of our principal stations, and where we had not the proper provision for doing so we made it; but I do not think that it has ever been taken advantage of by the dealers and drovers. I do not remember an instance where they have required us to unload the cattle and give them drink.

4213. Is there no method on the trucks themselves of giving the animals drink?—No; you cannot get to them.

4214. Is there no possibility of putting troughs into the sides of the trucks, and putting water into those troughs when come to a station?—One half of the cattle would never get their heads outside; to begin with.

4215. How many hours may live cattle coming from the north of Scotland be in the trucks before they are delivered in the London market?—I dare say that in some instances they will be 36 hours.

4216. And sometimes a considerable longer period, when there are delays; is it not sometimes as much as 50 or 60 hours?—Very seldom indeed, and I think that in that case they would necessarily be unloaded; but the cattle trade runs very punctually. We are obliged to do it, because the cattle are run to the different markets, and therefore they generally keep very good time. They almost always are run special, and they arrive in time for the markets, therefore they are almost always as punctual as passenger trains.

4217. Do you not think that it would be advisable if railway companies as public carriers established regular provisions for feeding and watering cattle which they engaged to carry along their lines?—If that was done then they would take the responsibility of any delay occurring upon the line, and we should be perpetually subject to claims for missing a market, or being rather later than some other person in the market, and then we should have claims for loss of profit upon the cattle. We give the owners of the cattle the option whenever they like of providing them with water and food, and I think that they are the proper parties to judge whether that is necessary or not. I do not think that railway companies could take the responsibility of judging, or of detaining cattle upon the road, contrary to the advice of the owners.

4218. You are aware that a cabman in London may be punished if he allows a horse to be above a few hours without watering?—I believe that there is some regulation of the sort; and it may be very proper to apply to the owner of the cattle, who may be the judge, but not to railway servants, many of whom can form no idea of how long the cattle may have been in the waggons, or whether they require food or water.

4219. Then you would wish the penalty to apply, not to the railway company, but to the owner of the cattle?—Yes; who always accompanies the cattle.

4220. Would not that interfere with the arrangements of the railway companies in the traffic?—No. We have offered to stop the cattle at any of our principal stations, and any accommodation is provided which the owners may choose to select.

4221. How would it interfere much with the railway traffic if in the present emergency the export from the London Market of live meat was stopped for two months?—It would interfere with railways to the extent of the loss of traffic which might arise. I do not think that it would be serious.

4222. Must not the populations both of the provinces and of London be fed, and would not dead meat replace living meat?—It might do that, or it might enhance the value of cattle and meat in their own districts, because the butchers might not come to London to buy dead meat, and that would very much increase the price of cattle, and consequently of meat, in their own districts.

4223. But you do not think that interfering with the traffic for two months is a question of large importance?—I do not think that it is material to the railway companies whether they carry the cattle or the dead meat. They would no doubt lose a certain amount of traffic if it was stopped in that way.

4224. So far as I understand you as regards the Metropolitan Market, two months would be represented by 800 trucks of live cattle going out of the market, so far as your railway is concerned?—Yes; the effect would be more upon the public than upon railway companies.

4225. Are your regulations at present, with regard to disinfecting, strictly carried out in every load of

* *See* Appendix C.

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cattle?—Yes; in accordance with the regulations which I have handed in.

4226. (*Chairman.*) (*To Mr. Allport.*) You are traffic manager of the Midland Railway?—Yes.

4227. Is there a large traffic in cattle on that railroad?—Yes; we have a large cattle traffic. I only heard last night that my attendance here to-day was required, and our head-quarters being at Derby I have not the means at hand to give the Commissioners the returns. Of course our cattle traffic is not at all equal to that of the London and North-western Railway Company; but still we have a large cattle traffic, more especially from the grazing districts of Derbyshire, Leicestershire, Northamptonshire, and Lincolnshire. We bring up a large quantity of cattle to London.

4228. It is principally fat cattle which you carry?—Entirely fat cattle to London. We of course carry a large quantity of lean cattle in various directions, and also a large quantity of fat cattle to the various towns.

4229. Will there be a large traffic in lean cattle for the next two months?—No; the lean cattle traffic is pretty well over for the season; certainly at the end of this month it will be over. All the fairs have been held both in Scotland and in the north of England, and I think that I may say that practically the lean cattle trade is over.

4230. Could you furnish the Commission with a return of the cattle which you bring into London and the cattle which you take out of London again?—Yes.

4231. And also a similar return to some of the principal towns through which your line runs?—That I can do.*

4232. Can you state whether the export traffic from London has diminished much since the Consolidated Order in Council with regard to animals coming only for slaughter to the Metropolitan Market?—We do not take much out of London; we do a little, but not any very great quantity. I do not think that that has interfered with it. I think that if there had been any diminution of the traffic either one way or the other I should have heard of it. I may state that there has been a falling off of the cattle traffic lately into London, and I think that almost all the railway companies will have found that there has been a very considerable falling off lately into London.

4233. How do you account for that?—I do not know whether it is from the diminished demand in consequence of the high price of meat in London, or from the fear which the farmers may have of sending their cattle into market, and losing them, but there has been a falling off. I may state that this last week, taking a monetary point of view, our cattle traffic, I think, was about 600*l.* as against 1,000*l.* in the corresponding week of last year, and that is principally in the direction of London. Our lean cattle traffic this year has been much larger. I think that by the last return which I have it appears that we have brought over already something like 20,000 head of lean cattle from Ireland by way of Morecambe.

4234. But that trade is principally over for the year?—Yes.

4235. Has the dead meat traffic increased?—No; that is very stationary. Perhaps I can explain the way that dead meat comes. In all our large manufacturing towns, wherever there is a poor population, of course there is a large demand for the inferior parts of the cattle, and you will find that the great bulk of the dead meat which comes to London consists of the best joints. They do not kill the carcases and send them up altogether, but they send the best joints. That applies to many of the towns upon the Midland Railway. From Leeds, for instance, and from that district, we bring a considerable quantity of dead meat to London, and also from

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* The subjoined Returns were subsequently sent:—

RETURN showing the NUMBER of CATTLE, CALVES, PIGS, SHEEP, and HORSES carried upon the MIDLAND RAILWAY for the Month of September 1865.

Number of—

Cattle.	Calves.	Pigs.	Sheep.	Horses.
16,238	1,568	9,250	60,414	363

of which the following numbers were carried to and from the under-mentioned towns:

Places.	From.					To.				
	Cattle.	Calves.	Pigs.	Sheep.	Horses.	Cattle.	Calves.	Pigs.	Sheep.	Horses.
Birmingham	30	2	244	1,142	12	743	31	719	1,394	—
Sheffield	29	28	168	299	—	846	131	1,472	3,247	—
Leicester	1,156	—	94	3,311	—	942	3	1,422	3,102	—
Nottingham	189	4	86	1,294	—	171	73	544	2,712	—
Leeds	235	12	60	1,551	—	347	208	97	3,258	11
Derby	402	133	1,287	2,606	19	235	21	918	3,524	18
Market Harbro'	1,172	—	4	1,984	4	105	12	83	1,244	—
Kibworth	681	—	—	1,094	—	—	—	—	67	—
Bedford	42	170	499	370	—	124	137	237	1,005	—
London	—	—	12	3	—	3,049	2	—	4,579	30

RETURN showing the TOTAL NUMBER of CATTLE, SHEEP, and PIGS received at and forwarded from LEICESTER, by the MIDLAND COMPANY, during the year ending 30th September 1865.

Received at.			Forwarded from.		
Cattle.	Sheep.	Pigs.	Cattle.	Sheep.	Pigs.
11,823	55,930	18,990	18,766	26,495	1,290

RETURN showing the TOTAL NUMBER of CATTLE forwarded from BELFAST to MORECAMBE during the years—

1862.	1863.	1864.
36,413	36,142	23,932

Midland Railway, General Manager's Office,
Derby, 30th October 1865.

JAMES ALLPORT.

Lincolnshire, and from Derby, and from various places, the inferior joints being consumed by the population on the spot. Alluding to slaughtering cattle for the London market, instead of sending them alive, I do not think that it could by any possibility be carried out. Take the principal grazing county which we have, namely, Leicestershire; the traffic is carried on in the way which I will now explain. The farmers send their cattle to certain cattle dealers; they are loaded at small stations convenient to the farmers, and sent to London, or to the other large towns; but as to slaughtering those cattle, the farmer of course could not do it, and could not be expected to do it, and in any of the small towns or villages where these cattle are loaded you could not for months organize a system of slaughtering. Then when the cattle were slaughtered, what would you do with the skins? You have no means in the country of curing these skins, and they would have to be sent to London. It would throw such an immense increase of trade into the hands of the country dealers that they could not deal with it. I think that if you inquired into the details of such a trade for the supply of a population of three millions it would be be found utterly impracticable. Besides that, as Mr. Cawkwell very justly observes, the London market is on a Monday, and the butchers keep their cattle until they want them; but to regulate the supply of meat for London from the country would involve an amount of organization which, much as we railway men are accustomed to that sort of thing, I should shrink from.

4236. Your observation applies to the stoppage of all movement of cattle altogether; it does not apply merely to not allowing cattle to leave the town alive?—Leicester and Derby are very large cattle markets; the great bulk of the cattle sold in those two towns are not for the supply of the population in them. The farmers bring their cattle to those markets; cattle dealers and butchers from various parts of the country attend, and buy them to send to other towns and villages. Deducting the demand in Leicester, we have the same amount of cattle traffic from Leicester as into Leicester, and on market days our cattle traffic from Leicester is very large.

4237. To butchers in London and other towns?—Yes; to butchers and dealers; chiefly cattle dealers. Dealers attend from market to market, and take the cattle from Leicester to Birmingham, or from Leicester to Sheffield, or Nottingham, or to London.

4238. You therefore think that an order prohibiting cattle leaving Leicester alive would interfere greatly with the trade; and you would wish to see an alteration to the extent of allowing them to be removed alive to London and other towns?—Certainly. Leicestershire, as everyone knows, is a very important grazing country. The farmers could not take their cattle to Birmingham and to various other places. They would take them, as they have been accustomed to for years past, to the nearest market town; and their own market town, namely, Leicester. All the dealers and butchers attend and purchase them, and take them through the country; but to stop that trade it appears to me would be creating a great difficulty.

4239. Could you stop it so far as to prevent those cattle from returning to the farm, and mixing with other cattle; because we are told that the disease is greatly spread by animals going to market contracting the disease there, and then returning to the pastures, and affecting others?—I think that it is a very rare thing for cattle to return to the pastures. We carry a great deal to the various markets, but the cattle going from those markets are chiefly for consumption in towns. Very few cattle return to the grazier.

4240. But we are told that butchers often buy in London, and take the cattle to Birmingham, and keep them with other cattle for a few days, and that in that way they take the disorder?—I think that it is very likely that the butchers will do that. The butchers will take them from the London market, and from the Leicester market, and put them into pastures until they want to kill them.

4241. How would you stop that means of spreading the disorder? Have you thought of that at all?—I have; and it occurs to me that, as the disease has been more confined to the southern districts more immediately surrounding London, no great harm would result from live cattle not being sent out of London into the country for a period. It certainly would be interfering with trade, which is very undesirable; but it would not involve the same difficulties as stopping the live cattle going from all the market towns in the country.

4242. Take a town which is not in your district,—but take Norwich, where there has been a great deal of disease, and the Market Hill there is supposed to be very much infected; what would you do with respect to a place like Norwich?—I fancy that a proper system of inspection would prevent any spread of disease from Norwich. I am not aware of the particular trade of Norwich in cattle, but I should hardly think that there would be any very large quantity of cattle sent out of Norwich to various other markets. If you have an isolated case there, I think that you must apply a special remedy. I have made it my business to inquire lately from the cattle dealers in Leicestershire and Nottinghamshire, and throughout our districts, and I have not heard of a single case of disease being imported from London, although we do carry the cattle from London.

4243. But you are aware that in a great many parts of Scotland, and in almost every part of England, the disease now exists?—Yes; but to a very limited extent in the Midland counties.

4244. You would be inclined to prevent animals from leaving London alive, but would allow them to leave country markets?—If it was necessary to stop it at all, I should prevent it; but I have not yet heard sufficient to justify me in giving an opinion that it is necessary even to stop the trade from London. The disease, in my opinion, should increase very much more than it has done in order to justify so large an interference with the trade of the country as that.

4245. But you are aware that the longer the disease goes on the more difficult it is to find any measure which will stop it?—No doubt it is.

4246. Have many diseased cattle been seized at your stations?—We have not had one. We are carrying out the regulations very strictly, and I have not heard of a single case.

4247. What are those regulations?—I have not a copy of them with me, but they are very similar to those of the London and North-western Company. All the great companies have issued very similar regulations. We insist upon all the cattle pens being cleansed after each use. I will send to the Commissioners a copy of those regulations.*

4248. Have you any system of inspection at the stations where cattle are brought upon your line?—No; we discussed that very fully, but we found it impracticable. A station master at 25*s.* or 30*s.* a week would be quite incapable of judging of the state of the cattle, and to put an inspector at all our small stations would be impracticable.

4249. (*Dr. Playfair.*) If you allowed movement from such cattle markets as Leicester and Derby, how would you provide that such cattle should be immediately forwarded to a slaughtering market, and should not go back into meadows, so as to mix with other cattle?—I do not think that you could provide for it. The butchers in the various towns have not the means of keeping the cattle under cover until they require them. A butcher in Birmingham, for instance, will come to Leicester Market, and will buy 25 or 30, or 40 head of cattle; he must turn them out into pastures. He cannot have the grass cut and brought into the town, and if he could he has not the means of keeping the cattle under cover.

* *See* Appendix C.

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4250. Then, such movement being allowed, is there any possibility of preventing the spread of infection? That is a question which I cannot answer. I am not sufficiently acquainted with the disease or its infectious nature to answer that question; but I know that both in Leicester and in Derby the corporation have appointed a very efficient system of inspection.

4251. Are you aware that no system of inspection can tell when the disease is in a state of incubation? —I am aware of that.

4252. You consider that at the present moment the Cattle Plague has not assumed the proportions which would justify extreme measures?—I think not.

4253. Are you aware that it is supposed that the spread of the Cattle Plague through almost all the counties of England, and through many of the counties of Scotland, has arisen from one diseased beast imported into the market in June?—I have heard that stated.

4254. Is it not likely that now, there being some thousands of diseased beasts, if motion of cattle is permitted much longer the disease will go on in a much larger proportion?—I fancy that the spread of this cattle disease is very similar to the spread of disease in the population. You find typhus fever, cholera, and a variety of diseases seize the population, and it will go to a certain extent, and then it gradually diminishes. I have read most of the accounts, and I have not yet read any satisfactory one of the origin of this disease. I am far from believing that the disease in England has been caused by one single head of cattle; but that is merely my own opinion, and an unprofessional opinion. I think that perhaps it is from something in the atmosphere. I firmly believe that if the disease was of such an infectious nature as to spread, as people sometimes believe, we must have had it throughout the vast herds of cattle in Leicestershire in former times, and to a very much larger extent. We may have had it in one or two isolated cases, but I have not heard of them, and I should have thought that it would have made its appearance in Leicestershire to a much greater extent than it has.

4255. Are you aware that in 1745, in spite of the very active measures of the Government of the time, the disease lasted in the country for about 12 years? —I am aware of that.

4256. And that it killed some hundreds of thousand head of cattle?—I am not aware of the number of cattle which it killed.

4257. Do you not think that with that experience before us some measures must now be taken to put a stop to this plague, even although they inconvenience transit throughout the country?—If it is a mere inconvenience of transit, no doubt it will be desirable to put a stop to it; but that is not the question. I think that it is a question of supply and demand; the people must be fed.

4258. Cannot people be fed under the system proposed, by sending live animals to a slaughtering market, or sending up dead meat where that is not possible?—I believe that before you could organize a system sufficiently extensive to supply the population of the country in a different manner from its present supply the thing would all be over.

4259. What is your reason for supposing that it will be over; is it the experience of the past, or the experience of foreign nations, or what?—Simply that I apprehend that people are now taking every possible pains, and I hope that science will step in and prevent the spread of the disease, or if it has spread will find out remedies. Surely science is in a much more advanced state now than it was in 1744, and I cannot think that a disease like the present, any more than typhus fever, can run its course unchecked by science.

4260. I suppose that science is not confined to England. Are you aware that the highest scientific authorities in Russia, all throughout Germany, in Holland, in Denmark, and in France, have devoted themselves to this subject for upwards of a century, and have yet found no cure for the disease, or means of stopping it, except extreme measures?— I have heard that that is so in Russia; I was not aware that it was so throughout Germany and France; it may be as you state.

4261. Are you aware of the existence of stringent regulations abroad with respect to the transit of cattle, when there is disease in the country?—I have seen those statements in the papers lately.

4262. Having thought of the subject, have you any other methods to recommend to the Commission by which to stop this disease, except interference with the free movement of cattle?—No; I have not paid sufficient attention to the matter to make any such suggestion; it is quite impossible for me to do so.

4263. (*Mr. M'Clean.*) If cattle were prevented from leaving London, do you think that it would interfere with the importation of foreign beasts?— It would interfere with their importation into the London market, certainly.

4264. That is the principal market for which they are sent over to England?—It is.

4265. Will it have a tendency to increase the price of food?—No doubt it would, and the cattle imported into London would go to the outports, and if the disease is brought into England by these foreign cattle it would tend to spread it still more; the cattle would still come, unless there was a prohibition altogether.

4266. (*Dr. Playfair.*) Would that be the case if the cattle were slaughtered at the outports?—If it was known generally that it was done I think that people would be afraid; they would say, "This is diseased meat;" and it would put a stop to the trade. I have no doubt but that would be the result.

4267. Must not people be fed?—Quite so; but people would rather go without food than eat diseased meat.

4268. (*Mr. M'Clean.*) Can you account for the high price of meat at the present time?—I fancy that it is because people are so much better off than they were, and every poor man is perhaps eating meat three or four times as often as he did 10 or 12 years ago.

4269. And more work is done in consequence?— I have no doubt that a great deal more work is done.

4270. (*Chairman.*) Do you get a large quantity of foreign cattle now from Hull?—No.

4271. (*Dr. Playfair.*) Do you think that the self-interest of the localities will induce them to co-operate vigorously in stopping this disease?—I think that it will; I think that that is now the tendency. An inspector frequently comes to me at Derby to consult with me, and I have letters from other inspectors in other districts, and they seem to be thoroughly alive to the importance of doing whatever they can to put a stop to the disease.

4272. Then you think that they would support the Government in any reasonable measures to put an end to the Cattle Plague?—I think that they would.

4273. (*Chairman.*) (*To Mr. Cawkwell.*) Has the Cattle Murrain much affected your traffic?—I do not think it has.

4274. Has the recent Order in Council with regard to the Metropolitan Market checked your export from London of traffic in live cattle?—No; our export from London is increasing.

4275. In live stock?—Yes.

4276. Since this order was issued restricting the coming of animals to the market to those coming for slaughter?—Yes; our traffic is increasing out of London.

4277. (*Mr. M'Clean.*) That is because foreign cattle are coming in?—Yes, no doubt, and are taking the place of English cattle. Butchers now come from Wolverhampton and Birmingham to London to buy cattle, when they formerly did not do so, but bought them in their own neighbourhood.

4278. (*Chairman.*) Are most of these cattle marked with the ordinary slaughter mark which it

is customary to put upon animals going for slaughter in the Metropolitan Market ?—I do not know.

4279. (*Dr. Playfair.*) Cutting the hair from the tail ?—I am not aware of that.

4280. (*Chairman.*) Have many diseased cattle been seized upon your line ?—I am not aware of any instance but one, and that was at Northampton.

4281. That was done by your station-master reporting to the inspector when he saw an animal sick ?—It was. I think that there has been one other case of cattle being refused, but I do not remember at what place. Those are the only two instances which I know.

4282. Have you at all considered what remedy should be taken to get rid of this disease in the country ? — No ; I have nothing that I can recommend.

4283. (*Mr. M'Clean.*) Do you agree with Mr. Allport that the self-interest of the localities will be sufficient to stop the disease ?—I am quite sure that they are doing everything they can to stop it in all the districts connected with our railway. I am sure that every possible effort is made.

4284. (*Dr. Playfair.*) What has been the result of these efforts ?—The detection of diseased animals.

4285. But has the result been the extinction of the disease in the localities ?—I cannot tell. I am not aware that it has.

4286. (*Chairman.*) Would you consider it necessary for the trade that animals should be allowed to be taken from a country market alive to go to other markets ?—I think that it would be a very difficult thing to prevent it, or rather a very objectionable step to prevent it, and for the reason explained by Mr. Allport, namely, that the butchers buy more than from hand to mouth at the markets ; they do not slaughter the cattle as soon as they buy them, but keep them for a week or two, and slaughter them as they require them.

4287. Is not that one of the worst sources of the spread of the disease ?—No doubt it is ; but the difficulty is an interference with the custom of the trade, and the mode in which business is done.

4288. (*Dr. Playfair.*) Do you consider that this disease is a very serious thing for the country ?—No doubt it is.

4289. Do you consider that the measures hitherto had recourse to have stopped its spread over the country ?—The measures have not stopped it, but I do not think that the disease is spreading so fast as people expected that it would do.

4290. Have you any idea how far as it has spread over the country ?—I am aware that it has spread into Scotland.

4291. Are you aware that it has spread to upwards of 30 of the counties of England ?—I do not know to how many counties it has spread; but I know that it has spread over a great district of England, and also into Scotland north of Edinburgh. I know that it was so when I was in Scotland some months ago.

4292. (*Chairman.*) Have you a considerable trade with the eastern counties by Cambridge ?—We have a very considerable trade in lean cattle to the eastern counties district for feeding ; we have not much fat cattle coming back from there. I think that they are principally sent from that district to the London market.

4293. That trade is now over ?—Yes.

The witnesses withdrew.

Adjourned.

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APPENDIX A.

RETURNS furnished by S. GIBBINS, Esq.

I.—RETURN showing the average approximate numbers of Cattle sold; (1) to be slaughtered in London; (2) to be slaughtered in the country; (3) for grazing; and the average number unsold.

	Before the Outbreak.	Since the Outbreak.
Number of Cattle ordinarily sold for slaughtering in London, about	3,000	3,300
Number of Cattle ordinarily sold for slaughtering in the country, about	1,000	1,500
Number of Cattle ordinarily sold for grazing, about	800	200
Average number unsold, about	700	500
Average number of Cattle in the Market, about	5,500	

II.—Like RETURNS for four weeks in October 1865.

	Number of Cattle sold to be slaughtered in London.	Number of Cattle sold to be slaughtered in the Country (including those whose Owners refused to allow them to be marked).	Number of Cattle unsold.	Total Number of Cattle in Market.	Number of Cattle whose Owners refused to allow them to be marked.
Monday, 2nd Oct., about	4,000	1,950	600	6,550	492
Thursday, 5th „ „	700	260	200	1,160	112
Monday, 9th „ „	3,500	1,963	367	5,830	463
Thursday, 12th „ „	650	266	274	1,190	126
Monday, 16th „ „	4,000	1,874	466	6,340	374

III.—RETURN showing the number of Foreign and English Cattle in the Market on each Market Day, from 1st January to 30th October 1865.

Monday.	English.	Foreign.	Thursday.	English.	Foreign.
Jan. 2	2,897	450	Jan. 5	489	121
„ 9	3,580	1,240	„ 12	1,080	560
„ 16	3,509	1,071	„ 19	690	520
„ 23	3,110	900	„ 26	707	617
„ 30	3,330	1,000	Feb. 2	620	520
Feb. 6	2,800	610	„ 9	370	950
„ 13	3,030	1,020	„ 16	980	350
„ 20	2,190	1,020	„ 23	690	470
„ 27	2,710	1,230	March 2	760	320
March 6	2,820	1,430	„ 9	400	720
„ 13	2,450	1,790	„ 16	610	750
„ 20	2,930	1,890	„ 23	522	798
„ 27	2,930	1,820	„ 30	500	750
April 3	2,970	1,210	April 6	270	520
„ 10	2,560	1,410	„ 13	550	440
„ 17	1,870	1,300	„ 20	730	410
„ 24	2,910	1,380	„ 27	780	500
May 1	1,820	1,990	May 4	604	646
„ 8	2,800	2,020	„ 11	410	450
„ 15	2,800	1,460	„ 18	510	360
„ 22	3,230	1,750	„ 25	570	570
„ 29	2,190	1,470	June 1	650	540
June 5	3,100	1,540	„ 8	760	380
„ 12	3,110	1,450	„ 15	590	700
„ 19	2,910	2,080	„ 22	987	863
„ 26	2,100	2,380	„ 29	600	1,420
	72,656	36,911		16,379	15,245

III.—Return, &c.—*continued.*

Monday.	English.	Foreign.	Thursday.	English.	Foreign.
July 3	2,000	3,040	July 6	590	670
„ 10	2,520	2,500	„ 13	500	610
„ 17	2,860	2,150	„ 20	650	630
„ 24	3,360	1,970	„ 27	760	550
„ 31	2,820	3,120	Aug. 3	470	520
Aug. 7	3,400	3,300	„ 10	580	950
„ 14	2,320	4,000	„ 17	510	580
„ 21	2,080	3,460	„ 24	440	620
„ 28	2,240	2,550	„ 31	600	590
Sept. 4	2,130	2,140	Sept. 7	480	1,180
„ 11	2,210	3,710	„ 14	560	520
„ 18	2,330	3,910	„ 21	480	230
„ 25	2,460	3,260	„ 28	695	395
Oct. 2	2,410	4,140	Oct. 5	700	460
„ 9	2,610	3,220	„ 12	410	780
„ 16	2,550	3,790	„ 19	450	710
„ 23	3,020	3,830	„ 26	860	690
„ 30	3,110	3,180			
1865 - Jan. to June	46,430 / 72,656	57,270 / 36,911	1865 - Jan. to June	9,735 / 16,379	10,685 / 15,245
Total -	119,086	94,181	Total -	26,114	25,930

		English.	Foreign.
Totals	Monday's market	119,086	94,181
	Thursday's „	26,114	25,930
		145,200	120,111
Total number of beasts to October 30, 1865		265,311	

Number of Beasts sent to the Metropolitan Market in the Years 1862, 1863, 1864, and part of 1865.

	English.	Foreign.	Total.
1862 - -	249,051	51,466	300,517
1863 - -	229,392	80,238	309,630
1864 - -	220,294	119,174	339,468
1865 - - 10 months.	145,200	120,111	265,311 (10 months.)

Comparison of the Number in 1862 and 1865, from July 6 to October 26, 1865.

1865.	English.	Foreign.	1862.	English.	Foreign.
Week ending			Week ending		
July 6	2,590	3,710	July 5	3,720	1,070
„ 13	3,020	3,110	„ 12	3,763	1,767
„ 20	3,510	2,780	„ 19	4,060	1,560
„ 27	4,120	2,520	„ 26	3,709	1,751
Aug. 3	3,290	3,640	Aug. 2	4,212	1,828
„ 10	3,980	4,250	„ 9	5,272	1,418
„ 17	2,830	4,580	„ 16	4,474	1,526
„ 24	2,520	4,080	„ 23	4,514	1,226
„ 31	2,840	3,140	„ 30	4,579	1,816
Sept. 7	2,610	3,320	Sept. 6	5,327	1,633
„ 14	2,770	4,230	„ 13	4,816	1,834
„ 21	2,810	4,140	„ 20	5,630	2,120
„ 28	3,155	3,655	„ 27	5,180	1,920
Oct. 5	3,110	4,600	Oct. 4	5,280	2,220
„ 12	3,020	4,000	„ 11	5,070	2,050
„ 19	3,000	4,500	„ 18	4,900	2,010
„ 26	3,880	4,520	„ 25	5,350	2,030
	53,055	64,775		79,856	30,309
Total 4 mos. 1865	118,030		1862 -	110,165	

IV.—Return for Ten Weeks of Animals (1) sent out of the Market as diseased; (2) condemned as diseased; (3) seized in the Slaughter-houses; (4) condemned in the Slaughter-houses.

For the week ending.	Animals sent out of the market in consequence of having symptoms of the Cattle Plague on coming from infected sheds.	Animals condemned that have been sent out of the market.	Animals seized in the slaughter-houses.	Animals condemned in the slaughter-houses.
August 12	54	11	23	23
„ 19	48	12	65	65
„ 26	8	7	52	47
September 3	45	4	51	49
„ 10	26	11	26	22
„ 17	26	—	16	16
„ 24	2	2	17	13
October 1	9	2	6	6
„ 8	1	1	1	1
„ 15	—	—	2	2
	219	50	259	244

V.—Account of the Meat condemned in the City Markets as unfit for Human Food, during the Years 1861 to 1865, inclusive; from Returns by Dr. Letheby, the Medical Officer of Health for the City of London.

Years ending September.	Why condemned. Newgate Market. Dead.	Diseased.	Putrid.	Total.	Aldgate Market. Dead.	Diseased.	Putrid.	Total.	Leadenhall Market. Dead.	Diseased.	Putrid.	Total.	Total. Dead.	Diseased.	Putrid.	Total.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1861	25,843	65,467	12,056	103,366	2,323	7,115	1,885	11,323	5,453	18,516	2,800	26,769	33,619	91,098	16,741	141,458
1862	9,513	57,544	13,579	80,636	2,424	9,032	879	12,335	2,007	12,103	2,965	17,075	13,944	78,679	17,423	110,046
1863	15,780	86,230	52,493	154,553	1,458	6,446	2,851	10,755	3,086	21,394	20,717	45,197	20,324	114,120	76,061	210,505
1864	33,846	77,327	73,686	184,859	4,054	8,919	828	13,801	5,597	10,533	14,390	30,520	43,497	96,779	88,904	229,180
1865	19,669	91,444	77,981	189,094	5,547	22,384	3,517	31,448	2,177	10,786	14,322	27,285	27,393	124,614	95,820	247,827
Total in 5 Years	104,651	378,062	229,795	712,508	15,806	53,896	9,960	79,662	18,320	73,332	55,194	146,846	138,777	505,290	294,949	939,016

Years.	Kind of Meat condemned. Newgate Market. Sheep and Lambs.	Calves.	Pigs.	Qrs. of Beef.	Joints	Aldgate Market. Sheep and Lambs.	Calves.	Pigs.	Qrs. of Beef.	Joints	Leadenhall Market. Sheep and Lambs.	Calves.	Pigs.	Qrs. of Beef.	Joints	Total. Sheep and Lambs.	Calves.	Pigs.	Qrs. of Beef.	Joints
1861	723	27	73	718	373	46	5	22	78	68	315	10	45	101	203	1,039	42	140	897	644
1862	402	31	97	539	592	48	—	10	86	48	92	3	42	98	128	542	34	149	723	766
1863	591	50	198	971	1,735	37	3	24	53	318	242	28	57	124	890	870	81	279	1,148	2,943
1864	776	42	322	1,097	1,888	34	3	49	83	52	165	11	75	110	773	975	56	446	1,290	2,713
1865	637	44	308	1,628	3,052	53	10	40	264	70	101	5	79	96	944	791	59	427	1,988	4,066
Total	3,134	194	998	4,953	7,646	218	21	145	564	554	915	57	298	529	2,938	4,267	272	1,441	6,046	11,132

Besides which, there were 7,928 lbs. of Meat seized in the Shops in the City. It consisted of 22 sheep, 5 pigs, 34 quarters of beef, and 291 joints and pieces of meat. 1,431 lbs. were diseased, 2,513 were putrid, and 3,984 were from animals that had died from disease.

VI.—ANSWERS to Inquiries respecting (1) the quantity of Meat condemned in the City Markets; (2) the quantities of dead Meat sent into Newgate Market.

17, Sussex Place, Regent's Park, N.W:
Dear Sir, October 23, 1865.

I regret that I have not had time until now to prepare a table of the meat condemned in the city markets during the last five years.

You will see by the enclosed that it amounts to nearly one million pounds, or rather more than 418 tons. But large as this quantity is, it does not represent the actual amount which passes into the shops of the lower class of butchers; for not only does a good deal of meat escape the notice of the inspectors, but, in consequence of our vigilance in the city, and the almost total absence of inspection outside the boundary of the city, there is a regular trade in diseased meat immediately beyond the city. I regard this as a very serious evil; for it is not only the means whereby unwholesome meat reaches the poorer classes, but it is a hardship, in a certain sense, to the butchers within the city, who justly complain that they are closely watched, and are at any moment liable to a legal prosecution for that which their neighbours can do with impunity.

You will perceive in the accompanying table that the number of quarters of beef and of joints of meat (chiefly beef) is much greater in 1865 than in any other year; and I may explain it by saying that the increase has been chiefly during the last three months, on account of the Cattle Disease. In fact while the average amount of diseased meat condemned in a quarter is only about 25,264 lbs., and in the September quarter is only 18,878 lbs., last quarter it was 66,147 lbs.; all which excess was diseased beef. You will see, therefore, how, with all the Government Regulations, the meat of diseased animals has found its way into the public markets.

I hope by Tuesday to be able to send you the approximative returns of meat sent to the London markets.

Truly yours,
Samuel Gibbins, Esq. H. LETHEBY.

Newgate Market,
Sir, October 20, 1865.

In reply to yours of yesterday, I beg to state that there are not any official means whatever by which the amount of dead meat sent into Newgate-market can be ascertained, but in the year 1861 inquiries were made with reference to the "Bill" for dismarketing Newgate-market, and some rough calculations were then entered into; the result was that about 120,000 tons of dead meat were computed to be sent into Newgate-market annually.

Taking the above data, and the partial falling off in the supply for the last two years consequent on the scarcity of stock, I presume you may estimate the probable average amount of dead meat sent into Newgate-market for the years 1862, 1863, and 1864 as about the amount above mentioned (say 120,000 tons), of which amount probably from one-fifth to one-fourth would be slaughtered in London.

I am, Sir,
Your obedient servant,
Samuel Gibbins, Esq. CHARLES FISHER.

APPENDIX B.

PAPER furnished by Mr. TAYLOR, Customs' Inspector at Harwich, showing the Regulations, &c. respecting Cattle Importation at Harwich.

HARWICH.

Accommodation for Foreign Cattle and Regulations observed on their Importation at Harwich.

Accommodation.—The vessels are constructed and fitted specially for the conveyance of cattle, as well as other cargo.

There are dry, well drained, and ventilated lairs, supplied with water, and the cattle pens, besides being well drained and spacious, are supplied with iron water troughs.

There are sheds on the Company's premises for the temporary housing of suspected cattle, approached without passing over any public road or thoroughfare.

There is a convenient and well drained slaughter-house at hand, but clear of the other premises, and a burial ground for condemned cattle or meat on railway ground, seven miles distant, where the Company have also agreed to deposit all the manure from the ships and lairs.

Regulations observed on arrival of a Cargo.—There is a Cattle Inspector attached to the Customs' staff, who is a member of the College of Veterinary Surgeons, and attends the arrival of every cargo.

Should a cargo arrive before evening, the animals are examined and passed at once, when they are either taken to the lairs and provided with hay and water, or to the pens (which are also provided with water), preparatory to being trucked and sent away. If arriving too late for a careful examination before dark, they are housed in the lairs till the following morning, provided with hay and water, as before stated; after being examined by the veterinary surgeon at daylight, and passed, are trucked and sent to their destination.

Animals bruised or seriously hurt are at once slaughtered in the Company's slaughter-house, and, together with any found dead, are, after inspection by the veterinary surgeon, if certified as fit for human food, delivered; but if otherwise, both carcases and hides are destroyed, by being saturated with carbolic acid, under the supervision of a customs officer, and, if decomposed, sent in charge of such officer to the burial ground before mentioned, and interred six feet deep, as would be the case with any showing symptoms of a contagious or infectious disorder; but none such have as yet arrived.

Should any cattle, &c. arrive with suspicious symptoms, but not sufficiently defined as to warrant the use of the knife, they would be removed to the building set apart for such a contingency, and subsequently be delivered, or slaughtered and buried, as the event might justify; but should a single animal affected with the plague arrive it would be destroyed and buried, and all those imported in the same ship detained and kept apart for so long a period as the customs authorities might deem necessary or expedient.

Ships.—On discharge of a cargo the steamers from the deck to the lower hold are scraped, flushed by means of a steam hose, and lime-washed, when they are inspected by a customs officer on being officially cleared for another voyage.

Trucks.—The trucks conveying cattle arriving from the continent are kept separate from all others, and cleaned and lime-washed after every journey.

Lairs.—The lairs are regularly lime-washed and the litter removed, when they are thoroughly cleansed and fresh litter laid down.

Finally—the whole are supervised by the officers of customs and their cattle inspector.

J. W. WOOD,
Collector of Customs.
(Agreed) J. G. POWERS,
Continental Traffic Manager, Great Eastern Railway.
Customs, Harwich, Aug. 26, 1865.

APPENDIX C.

REGULATIONS respecting CATTLE TRAFFIC, referred to in the Evidence of J. ALLPORT and W. CAWKWELL, Esqrs.

Midland Railway, Goods Managers' Office,
Dear Sir, Derby, August 17, 1865.

To prevent as much as possible the spread of the Cattle Disease, the Company have been requested to adopt such measures as may be necessary to cleanse the cattle waggons and cattle docks used on this railway, and with this view I am instructed to request that you will, after receipt hereof, cause every cattle waggon arriving at your station loaded to be well washed when unloaded, and then to be further washed with lime water; the proportion of lime and water to be about the same as used for white-washing.

Your cattle docks must also be cleansed daily, and the ground within the railing carefully cleared of any manure deposited on it, and then sprinkled over with slacked lime; about two or three pounds being used to each separate pen.

You may get the lime at your station or in the neighbourhood, and send us the bill for what you have used at the close of each month, until you receive further instructions.

Yours truly,
THOS. WALKLATE,
per E. C. HEWES.

Midland Railway, Goods Managers' Office,
Derby, October 7, 1865.

Dear Sir,

In reference to our circular of the 17th August, Instructing you to have all cattle waggons cleansed when unloaded, please note that the instructions will also apply to sheep vans or cattle waggons loaded with sheep.

Acknowledge receipt.

Yours truly,
THOS. WALKLATE,
per W. FEAST.

London and North-western Railway.

(Circular, No. 549 A.)

To the Cattle Traffic Superintendent, the District Goods Managers, Agents, and others concerned.

The attention of the Directors having been drawn to the prevailing Cattle Murrain, and to the necessity of taking all reasonable precautions in the case of live stock entrusted to the London and North-western Railway Company for conveyance, they have decided to give immediate effect to the following regulations, which it is hoped may have the effect of limiting the spread of the infection:—

1. That no live-stock presenting manifest symptoms of disease, similar in appearance to those of the Cattle Plague, be received for carriage at any of the Company's stations.
2. That the cattle-pens at the stations be whitewashed, and also cleansed and purified immediately after the removal of each lot of live-stock.
3. That the cattle waggons be thoroughly cleansed and purified immediately after each journey.
4. That chloride of lime, whitewash, or other approved disinfectants, be used in the cleansing and purifying of the pens and waggons.

Mr. Salmon to take steps, in concert with the divisional traffic superintendents and district goods managers, to carry these arrangements into immediate operation.

W. CAWKWELL,
General Manager's Office, General Manager.
Euston Station, London, N.W.
19th August 1865.

This circular to be substituted for Circular No. 549, dated 14th August, on the same subject.

London and North-western Railway.

(Circular, No. 552.)

Cattle Plague.

In the event of infected cattle reaching any of the Company's stations from stations on the London and North-western line, or from foreign companies' lines, the agents must lose no time in communicating, where possible, with the municipal authorities of the place, in order that the cattle may be subjected to the inspection of the proper officer.

In case the municipal authorities decline to act, or no local authorities can be found to act, the agent is authorized to employ a veterinary surgeon to inspect the suspected animals; and in the event of his report confirming the suspicions of the agent, the agent is to lose no time in having the infected animals killed and buried, and the trucks purified and cleansed, in terms of the order contained in Circular No. 549 A.

Cattle proved to be infected arriving at London and North-western stations must, on no account, be returned along the railway to the sending station. Such cattle must be destroyed, under the orders either of the municipal authorities, of the veterinary surgeon employed by the Company's agent, or in cases of emergency, of the agent himself.

Great care must be taken that all cleaning materials used in sweeping or cleansing cattle waggons or pens which have been occupied by diseased cattle should not be again used until they have been subjected to a disinfecting process. The same observation applies to the clothes worn by porters and loaders who have come in contact with infected cattle, or the trucks in which infected cattle have travelled.

W. CAWKWELL,
General Manager's Office, General Manager.
Euston Station, London, N.W.,
August 26, 1865.

APPENDIX D.

RETURNS of FOREIGN CATTLE and SHEEP imported into the United Kingdom between the Years 1860–64, and in the first Nine Months of 1865.

Cattle Plague Commission,
2, Victoria Street, Westminster, S.W.

Gentlemen,

19th October 1865.

I am directed by Her Majesty's Commissioners for inquiring into the nature and treatment of the Cattle Plague to request that the Board of Trade will have the goodness to furnish them with the following information if it is in the power of the Board to do so, viz.:

1. A return showing the total numbers of foreign horned cattle and of foreign sheep imported into the United Kingdom during the period from 1860 to 1865, both inclusive, up to the latest possible date in the latter year; showing also the ports of importation, and the numbers landed at each port.
2. A return showing the ports or places at which such cattle and sheep were respectively shipped, and, if possible, the countries or places from which they came.

I am, &c.,
The Joint Secretaries to the Board of Trade. MOUNTAGUE BERNARD.

Office of Committee of Privy Council for Trade.

Sir,

Whitehall, 15th November 1865.

In compliance with the request contained in your letter of the 19th ultimo, I am directed by the Lords of the Committee of Privy Council for Trade to enclose for the use of the Cattle Plague Commission the accompanying particulars relative to the importation of foreign horned cattle and sheep into this country, which they have obtained from the Commissioners of Customs.

I am, &c.,
The Secretary to the Cattle Plague Commission. J. EMERSON TENNENT.

RETURNS of FOREIGN CATTLE and SHEEP Imported into the UNITED KINGDOM between the Years 1860—64, both inclusive, and in the first Nine Months of 1865.

1. OXEN and BULLS.

Countries from which Imported into England, Scotland, and Ireland severally.	Years. 1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.
Into ENGLAND.	Number.	Number.	Number.	Number.	Number.	Number.
From Russia: Ports within the Baltic	20	—	2	—	—	321
„ Sweden: Ports without the Baltic	—	—	3	—	—	1,096
„ Norway	—	—	9	—	—	48
„ Denmark	24,329	—	357	—	—	2,128
„ Duchies of Slesvig and Holstein		22,536	22,778	27,853	30,448	16,928
„ Iceland, Faroe Islands, and Greenland	—	—	—	3	—	—
„ Prussia	—	—	—	—	1	—
„ Hanover	—	—	—	—	38	140
„ Oldenburg and Kniphausen	431	298	—	—	—	1
„ Hamburg	7,665	7,228	2,347	6,920	11,619	17,584
„ Bremen	2,497	3,352	2,398	4,713	6,179	3,582
„ Holland	20,706	19,363	18,551	43,276	77,481	45,733
„ Belgium	126	132	93	677	3,679	10,426
„ Channel Islands	—	—	—	4	—	—
„ France: Ports without the Mediterranean	5,506	4,599	2,077	2,370	2,760	7,910
„ Portugal	4,397	4,933	8,804	5,045	5,790	2,905
„ Spain: Ports without the Mediterranean	3,573	8,360	6,767	6,433	8,212	6,127
„ —— Ports within the Mediterranean		236	20	118	33	—
„ Egypt	4	—	—	—	—	—
„ Algeria	—	—	—	—	149	—
„ British India: Madras	—	—	4	—	—	—
„ United States of America: On the Atlantic Northern Ports	—	12	—	—	—	—
	69,254	71,049	64,210	97,412	146,389	114,929
SCOTLAND.						
From Russia: Ports on the White Sea	—	—	—	—	—	4
„ Denmark	6	—	—	—	—	2,824
„ Duchies of Slesvig and Holstein		—	—	—	—	—
„ Iceland, Faroe Islands, and Greenland	1	—	7	—	9	6
„ Prussia	—	—	—	—	—	5
„ Hamburg	762	239	244	1,229	2,860	2,219
„ Holland	—	—	—	—	357	45
„ Portugal	—	—	—	—	156	184
„ Spain: Ports without the Mediterranean	—	—	—	—	36	—
	769	239	251	1,229	3,418	5,287
IRELAND.						
From Holland	—	—	—	—	—	5
„ Portugal	—	—	—	—	794	552
„ Spain: Ports without the Mediterranean	—	—	—	5	—	—
„ —— Ports within the Mediterranean	—	—	—	10	—	—
	—	—	—	15	794	557
UNITED KINGDOM	70,023	71,288	64,461	98,656	150,601	120,773

Ports of England, Scotland, and Ireland into which Imported.	Years. 1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.
Into ENGLAND.	Number.	Number.	Number.	Number.	Number.	Number.
London	52,128	54,417	50,554	81,618	115,219	74,098
Arundel	—	—	—	—	4	441
Cardiff	—	40	—	—	—	—
Dartmouth	32	—	40	40	—	—
Falmouth	1,615	1,406	805	718	1,955	2,781
Goole	208	185	24	—	—	6
Grimsby	522	9	—	322	248	403
Hartlepool	795	56	40	246	910	982
Harwich	—	—	—	1,142	11,712	15,417
Hull	3,490	2,147	344	3,801	6,603	11,634
Liverpool	1,685	2,966	5,336	4,473	3,446	2,378
Lowestoft	1,416	260	—	433	66	20
Lynn	131	—	—	—	—	—
Newcastle	1,146	186	97	400	940	1,400
Newhaven	12	—	6	5	—	44
Penzance	—	30	—	—	58	264
Plymouth	4,621	5,297	2,713	1,972	2,719	2,493
Poole	—	—	—	—	—	21
Portsmouth	—	36	—	—	—	—
Shields	—	—	—	—	—	22
Southampton	1,953	3,923	4,251	2,241	2,509	2,539
Sunderland	—	—	—	—	—	16
Teignmouth	—	72	—	—	—	—
Weymouth	—	—	—	1	—	—
Yarmouth	—	19	—	—	—	—
	69,254	71,049	64,210	97,412	146,389	114,929
SCOTLAND.						
Dundee	—	—	—	63	151	4
Glasgow	—	—	—	—	192	184
Grangemouth	676	239	244	—	—	437
Kirkaldy	47	—	—	—	—	—
Kirkwall	—	—	7	—	—	6
Leith	46	—	—	1,166	3,075	4,656
	769	239	251	1,229	3,418	5,287
IRELAND.						
Dublin	—	—	—	—	794	557
Waterford	—	—	—	5	—	—
Wexford	—	—	—	10	—	—
	—	—	—	15	794	557
UNITED KINGDOM	70,023	71,288	64,461	98,656	150,601	120,773

FOREIGN CATTLE and SHEEP Imported into the UNITED KINGDOM—*continued.*

2. COWS.

Countries from which Imported into England, Scotland, and Ireland severally.	Years.						Ports of England, Scotland and Ireland into which Imported.	Years.					
	1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.		1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.
Into ENGLAND.	Number.	Number.	Number.	Number.	Number.	Number.	Into ENGLAND.	Number.	Number.	Number.	Number.	Number.	Number.
From Russia: Ports within the Baltic	2	1	1	1	—	—	London	2,012	5,692	1,459	2,231	1,789	1,377
„ Sweden: Ports without the Baltic	1	—	—	—	—	9	Arundel	—	—	—	—	183	199
„ Norway	—	—	49	5	1	11	Bristol	—	—	—	—	2	—
„ Denmark	} 757	{ —	—	—	—	238	Cardiff	—	24	—	—	—	—
„ Duchies of Slesvig and Holstein		685	399	568	591	207	Dartmouth	33	34	24	—	—	—
„ Hanover	—	—	—	—	166	266	Dover	—	—	—	—	—	8
„ Oldenburg and Kniphausen	—	—	—	—	—	3	Exeter	26	—	—	18	—	44
„ Hamburg	328	153	15	611	2,703	5,856	Falmouth	19	30	193	269	500	571
„ Bremen	32	—	13	321	1,383	3,469	Folkestone	—	—	34	—	—	—
„ Holland	4,931	8,368	2,945	8,029	21,973	11,209	Fowey	—	—	60	65	—	19
„ Belgium	20	—	8	10	41	431	Goole	1,365	1,665	832	2,860	4,063	1,924
„ Channel Islands	—	—	—	11	47	—	Grimsby	2	—	—	—	1	13
„ France: Ports without the Mediterranean	899	629	831	805	891	1,211	Hartlepool	162	53	—	130	830	1,232
„ Portugal	—	20	—	—	9	—	Harwich	—	—	—	757	3,153	1,910
„ Spain: Ports without the Mediterranean	—	—	—	—	32	—	Hull	2,473	1,833	1,194	3,627	15,364	12,998
„ British India: Madras	—	1	6	—	—	—	Ipswich	—	—	48	—	—	—
„ ——— Bengal and Pegu	—	—	—	1	—	—	Liverpool	—	4	1	3	120	—
„ China	—	—	—	1	—	—	Lowestoft	26	—	—	5	—	—
„ British North America: Prince Edward Island	—	—	1	—	—	—	Lyme	—	—	35	—	—	—
							Lynn	15	—	—	—	—	—
							Newcastle	19	—	—	35	1,596	2,211
							Newhaven	342	145	174	164	115	60
							Penzance	—	—	—	—	1	20
							Plymouth	78	12	72	94	5	140
							Poole	—	—	—	—	1	4
							Portsmouth	24	—	7	—	—	—
							Rye	—	—	74	—	38	28
							Scarborough	30	—	28	—	—	—
							Shields	—	—	—	—	—	30
							Southampton	242	130	33	88	75	83
							Sunderland	—	—	—	—	—	4
							Swansea	—	—	—	—	1	—
							Teignmouth	—	146	—	—	—	—
							Weymouth	102	89	—	17	—	35
SCOTLAND.	6,970	9,857	4,268	10,363	27,837	22,910	SCOTLAND.	6,970	9,857	4,268	10,363	27,837	22,910
From Denmark	—	—	—	—	1	1,003	Dundee	—	—	—	—	—	198
„ Iceland, Faroe Islands, and Greenland	—	—	—	21	—	12	Grangemouth	—	18	38	—	—	280
„ Hamburg	17	48	89	609	403	996	Kirkaldy	—	—	—	21	—	—
„ Holland	—	1	—	4	665	656	Kirkwall	—	—	—	—	—	12
							Leith	17	31	51	613	1,069	2,177
IRELAND.	17	49	89	634	1,069	2,667	IRELAND.	17	49	89	634	1,069	2,667
From Holland	—	—	—	—	—	5	Dublin	—	—	—	—	—	9
„ Portugal	—	—	—	—	—	4							
	—	—	—	—	—	9		—	—	—	—	—	9
UNITED KINGDOM	6,987	9,906	4,357	10,997	28,906	25,586	UNITED KINGDOM	6,987	9,906	4,357	10,997	28,906	25,586

Foreign Cattle and Sheep Imported into the United Kingdom—*continued.*

3. CALVES.

Countries from which Imported in England, Scotland, and Ireland, severally.	Years.						Ports of England, Scotland, nd Ireland into which Imported.	Years.					
	1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.		1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.
Into ENGLAND.	Number.	Number.	Number.	Number.	Number.	Number.	**Into ENGLAND.**	Number.	Number.	Number.	Number.	Number.	Number.
From Russia: Ports within the Baltic	—	—	—	—	—	—	London	22,774	21,509	25,168	30,919	29,961	20,439
„ Sweden: Ports without the Baltic	—	—	6	—	—	2	Arundel	—	—	—	—	12	5
„ Denmark	8	—	—	—	—	42	Cowes	—	10	—	—	—	—
„ Duchies of Slesvig and Holstein		6	3	7	7	3	Dartmouth	7	4	—	—	—	—
„ Russia	6	—	—	—	—	—	Dover	—	—	—	—	33	33
„ Hanover	17	—	—	—	3	6	Exeter	2	—	—	2	—	1
„ Oldenburg and Kniphauson	1	—	—	—	—	—	Falmouth	17	43	16	7	3	22
„ Hamburg	131	1	—	42	1,487	944	Fowey	—	—	6	2	4	9
„ Bremen	—	—	—	—	9	1,017	Goole	684	632	668	955	1,366	1,151
„ Holland	24,244	23,298	26,686	36,837	45,503	35,882	Hartlepool	6	—	—	12	1,360	1,238
„ Belgium	2,414	1,869	1,984	3,732	4,624	2,624	Harwich	—	—	—	2,769	10,853	9,993
„ France: Ports without the Mediterranean	37	726	389	616	496	946	Hull	3,556	3,375	3,037	6,211	8,227	7,929
„ Portugal	—	—	—	—	1	—	Ipswich	—	—	8	—	—	—
„ British India: Madras	—	1	1	—	—	—	Liverpool	—	1	—	—	—	—
							Lowestoft	—	—	—	88	—	—
							Lyme	—	—	3	—	—	—
							Lynn	—	—	—	—	—	—
							Middlesborough	—	—	—	2	—	—
							Newcastle	2	—	—	—	78	160
							Newhaven	3	10	2	6	6	174
							Penzance	—	—	—	—	1	—
							Plymouth	356	234	120	225	128	145
							Poole	—	—	—	—	—	1
							Portsmouth	—	14	—	—	—	—
							Rye	—	—	9	—	1	—
							Scarborough	1	—	2	—	—	—
							Shields	—	—	—	—	—	14
							Southampton	147	18	30	33	97	124
							Teignmouth	—	41	—	—	—	—
							Weymouth	3	10	—	3	—	28
	27,558	25,901	29,069	41,234	52,130	41,466		27,558	25,901	29,069	41,234	52,130	41,466
Into SCOTLAND.							**Into SCOTLAND.**						
From Denmark	—	—	—	—	—	58	Dundee	—	—	—	—	—	11
„ Hamburg	1	1	—	11	29	3	Grangemouth	—	1	—	—	—	—
„ Holland	—	—	—	—	42	11	Leith	1	—	—	11	71	61
	1	1	—	11	71	72		1	1	—	11	71	72
Into IRELAND.							**Into IRELAND.**						
From Portugal	—	—	—	—	25	27	Dublin	—	—	—	—	25	27
UNITED KINGDOM	27,559	25,902	29,069	41,245	52,226	41,565	UNITED KINGDOM	27,559	25,902	29,069	41,245	52,226	41,565

Foreign Cattle and Sheep Imported into the United Kingdom—*continued.*

4. SHEEP.

Countries from which imported into England, Scotland, and Ireland, severally.	Years.						Ports of England, Scotland, and Ireland into which imported.	Years.					
	1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.		1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.
Into ENGLAND.	Number.	Number.	Number.	Number.	Number.	Number.	**Into ENGLAND.**	Number.	Number.	Number.	Number.	Number.	Number.
From Russia: Ports within the Baltic	4	—	—	1	—	331	London	273,152	273,121	267,122	313,677	322,409	246,503
„ Sweden: Ports without the Baltic	8	17	—	50	—	534	Arundel	—	—	—	—	—	311
„ Norway	180	88	48	—	—	19	Dartmouth	21	—	—	—	—	—
„ Denmark	} 23,704	{ 2	—	—	—	831	Dover	—	—	—	—	)	12
„ Duchies of Slesvig and Holstein		{ 21,942	22,317	31,875	29,853	22,822	Falmouth	37	—	—	—	12	8
„ Prussia	—	46	—	—	—	—	Folkestone	—	—	135	—	—	—
„ Hanover	60	3	—	—	3	10	Goole	10	201	148	2,031	284	666
„ Oldenburg and Kniphausen	357	—	—	—	—	—	Grimsby	2,061	5	—	8,090	31,558	39,189
„ Hamburg	122,203	84,598	69,260	155,651	170,147	189,239	Hartlepool	1,391	564	764	16,073	24,052	24,339
„ Bremen	671	1,133	77	3,421	2,005	9,462	Harwich	6	—	—	9,532	37,082	92,349
„ Holland	156,037	183,954	183,537	203,370	249,642	138,573	Hull	19,738	16,452	6,338	34,639	37,582	50,831
„ Belgium	633	30	68	1,016	7,407	90,692	Liverpool	155	115	15	7	64	201
„ France: Ports without the Mediterranean	1,166	1,901	736	439	1,264	16,774	Lowestoft	1,054	35	—	1,788	12	—
„ Portugal	217	115	15	14	—	31	Lynn	135	—	—	—	—	—
„ Azores	—	6	—	—	—	—	Newcastle	6,896	3,115	1,444	9,842	7,200	10,553
„ Spain: Ports without the Mediterranean	—	13	4	12	—	5	Newhaven	—	—	16	94	4	158
„ Greece	1	—	—	—	—	—	Plymouth	526	241	4	2	—	86
„ Turkish Dominions, Natolia or Asia Minor	—	32	—	—	—	—	Poole	—	—	—	—	—	1,246
„ ——— Egypt	3	—	1	—	2	—	Portsmouth	13	—	—	—	—	—
„ British Possessions in South Africa	—	—	—	—	—	—	Southampton	47	18	72	73	64	3,031
„ Cape of Good Hope	—	—	—	—	1	—	Sunderland	—	2	—	2	—	10
„ British India: Bengal and Pegu	—	—	—	1	—	—	Teignmouth	—	24	—	—	—	—
„ China	4	—	15	—	—	—	Weymouth	6	—	—	—	—	—
„ British Australia: New Zealand	—	28	—	—	—	—	Yarmouth	—	15	20	—	—	—
„ Argentine Confederation	—	—	—	—	—	170							
	305,248	293,908	276,078	395,850	460,324	469,493		305,248	293,908	276,078	395,850	460,324	469,493
SCOTLAND.							**SCOTLAND.**						
From Denmark	—	—	—	—	727	3,704	Grangemouth	45	2	1	—	—	5,287
„ Duchies of Slesvig and Holstein	—	—	—	—	53	—	Kirkaldy	45	—	—	3	—	—
„ Iceland: Faroe Islands and Greenland	2	2	1	3	—	2	Kirkwall	—	—	—	—	—	2
„ Prussia	—	9	—	—	—	—	Leith	84	9	—	6,756	18,023	19,563
„ Hamburg	172	—	—	6,756	17,216	21,075							
„ Holland	—	—	—	—	27	71							
	174	11	1	6,759	18,023	24,852		174	11	1	6,759	18,023	24,852
IRELAND.							**IRELAND.**						
From Holland	—	—	—	—	—	46	Dublin	—	—	—	—	—	46
UNITED KINGDOM	305,422	293,919	276,079	402,609	478,347	494,391	**UNITED KINGDOM**	305,422	293,919	276,079	402,609	478,347	494,391

FOREIGN CATTLE and SHEEP Imported into the UNITED KINGDOM—*continued.*

5. LAMBS.

Countries from which Imported into England, Scotland, and Ireland, severally.	Years.						Ports of England, Scotland, and Ireland into which Imported.	Years.					
	1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.		1860.	1861.	1862.	1863.	1864.	Nine Months ended 30 Sept. 1865.
Into ENGLAND.	Number.	Number.	Number.	Number.	Number.	Number.	**Into ENGLAND.**	Number.	Number.	Number.	Number.	Number.	Number.
From Sweden: Ports without the Baltic	1	—	—	—	—	—	London	14,032	18,635	23,296	27,888	17,102	8,130
„ ——— Ports within the Baltic		—	—	—	—	—	Dartmouth	12	—	—	—	—	—
„ Norway	136	—	—	5	1	—	Dover	—	—	—	—	81	—
„ Denmark	4,345	—	—	—	—	1,159	Goole	—	—	7	127	31	39
„ Duchies of Slesvig and Holstein		4,072	3,907	6,029	6,102	2,115	Grimsby	1	—	—	—	—	—
„ Hanover	8	4	—	—	—	—	Hartlepool	4	4	3	—	118	316
„ Hamburg	7	4	50	—	35	381	Harwich	—	—	—	—	223	2,031
„ Bremen	—	—	—	7	14	412	Hull	317	365	87	144	299	590
„ Holland	10,284	14,923	19,433	22,071	11,537	7,360	Lowestoft	431	—	—	—	—	—
„ Belgium	—	—	—	54	24	12	Newcastle	—	—	—	—	—	492
„ France: Ports without the Mediterranean	16	—	—	1	141	162	Shields	—	—	—	—	—	3
„ China	—	—	3	—	—	—	Sunderland	—	—	—	8	—	—
„ Australia: New Zealand	—	1	—	—	—	—							
	14,797	19,004	23,393	28,167	17,854	11,601		14,797	19,004	23,393	28,167	17,854	11,601
Into SCOTLAND.							**SCOTLAND.**						
From Denmark	—	—	—	—	—	1,207	Kirkwall	—	—	—	—	—	9
„ Iceland, Faroe Islands, and Greenland	—	—	—	—	—	9	Leith	—	—	—	12	42	1,207
„ Hamburg	—	—	—	—	42	—							
„ Holland	—	—	—	12	—	—							
	—	—	—	12	42	1,216		—	—	—	12	42	1,216
Into IRELAND.							**IRELAND.**						
From Holland	—	—	—	—	—	1	Dublin	—	—	—	—	—	1
UNITED KINGDOM	14,797	19,004	23,393	28,179	17,896	12,818	UNITED KINGDOM	14,797	19,004	23,393	28,179	17,896	12,818

SUMMARY of the preceding ACCOUNT.

		Neat Cattle.				Sheep and Lambs.		
		Oxen and Bulls.	Cows.	Calves.	Total of Neat Cattle.	Sheep.	Lambs.	Total.
		Number.	Number.	Number.	Number.	Number.	Number.	Number.
Neat Cattle and Sheep imported into the United Kingdom -	Years 1860 -	70,023	6,987	27,559	104,569	305,422	14,797	320,219
	1861 -	71,288	9,906	25,902	107,096	293,919	19,004	312,923
	1862 -	64,461	4,357	29,069	97,887	276,079	23,393	299,472
	1863 -	98,656	10,997	41,245	150,898	402,609	28,179	430,788
	1864 -	150,601	28,906	52,226	231,733	478,347	17,896	496,243
	1865 to 30 Sept.-	120,773	25,586	41,565	187,924	494,391	12,818	507,209

NUMBER in each Month of 1865.—NEAT CATTLE.

January - - - -	4,836	June - - - -	27,108
February - - -	14,894	July - - - -	26,414
March - - - -	13,674	August - - -	35,285
April - - - -	13,408	September - - -	33,048
May - - - -	19,257		

Office of the Inspector General of Imports and Exports, Custom House, London, 9th November 1865.

(Signed) JOHN A. MESSENGER.

APPENDIX E.

CORRESPONDENCE with the BOARD OF TRADE as to Returns of Cattle within the United Kingdom.

Cattle Plague Commission,
House of Commons (Principal Floor, Room 10).
Westminster, S.W.
24th October 1865.

SIR,

I AM desired, by Her Majesty's Commissioners for inquiring into the origin, nature, and treatment of the Cattle Plague, to represent to you, as President of the Board of Trade, the importance of obtaining correct information respecting the number of horned cattle and sheep existing in the country.

Such returns, if they were in existence, would be valuable on the present occasion.

I may mention that the Government of the Netherlands, which is in possession of returns of this kind, is thereby enabled to publish weekly an exact statement, not only of the positive but of the proportionate loss in every commune which has been attacked by the disease. Such a statement could not be published here.

This, however, is by no means the only way in which such information would be useful.

I have, &c.
MOUNTAGUE BERNARD.

Right Hon.
T. Milner Gibson, M.P.,
Board of Trade.

Office of Committee of Privy Council for Trade,
Whitehall, 3d November 1865.

SIR,

I AM directed, by the Lords of the Committee of Privy Council for Trade, to acknowledge the receipt of your letter of the 24th ultimo, addressed to the President of the Board of Trade, by desire of Her Majesty's Commissioners for inquiring into the origin, nature, and treatment of the Cattle Plague, to represent the importance of obtaining correct information respecting the number of horned cattle and sheep existing in the country.

The representation of the Commissioners has received the prompt and anxious consideration of my Lords, and they entirely concur with Her Majesty's Commissioners as to the importance of ascertaining the stock of Cattle existing in this country.

If such information were obtained it could not fail to be of great utility and interest at the present time to the agriculturists, as well as to the public at large.

It appears that this country is almost exceptional in not possessing returns of the number of its Cattle.

Unfortunately it is for the chief division of the United Kingdom, England and Wales, that there is an entire absence of information, upon which reliance can be placed, as to the stock of Cattle. Returns of the live stock in Ireland are annually obtained, and the number in Scotland was ascertained in the years 1855–6 and 7.

The farmers in Ireland and Scotland have readily furnished this information by voluntary returns, and it is only in a similar way that the same particulars could at present be collected for England and Wales.

The Lords of the Committee of Privy Council for Trade are most desirous to promote the inquiry proposed by Her Majesty's Commissioners, and will take immediate steps to invite the co-operation of English agriculturists in a work of such manifest interest and importance.

I am, therefore, to request you will inform Her Majesty's Commissioners that orders will forthwith be given for the preparation and distribution of schedules for ascertaining the number of each kind of live stock in Great Britain. The inquiry will be extended to Scotland in order to obtain the information for the three divisions of the United Kingdom at one time.

The number of live stock belonging to individual persons will not be divulged.

Aggregate returns of stock will be prepared for specified districts, and such results only will be printed and published by the Board of Trade.

I have, &c.
J. EMERSON TENNENT.

To Mountague Bernard, Esq., &c. &c. &c.

APPENDIX F.

REGULATIONS or ORDERS of some FOREIGN GOVERNMENTS for the Prevention or Extirpation of the CATTLE PLAGUE.

FRANCE.

(*Transmitted by Earl Cowley.*)

Circular of the Minister of Agriculture.

Paris, le 11 Septembre 1865.

Monsieur le préfet, vous n'ignorez pas qu'une épizootie que l'on appelle en France *typhus contagieux des bêtes à cornes, rinder-pest* en Allemagne, et *cattle plague* en Angleterre, exerce depuis deux mois des ravages dans ce dernier pays, où elle s'est répandue de proche en proche en irradiant de la métropole, son foyer primitif, jusqu'en Ecosse, où elle a fait périr déjà beaucoup de bestiaux, notamment dans les laiteries d'Edinbourg.

De la Grande-Bretagne, où elle était restée confinée pendent les premières semaines qui ont fait suite à son invasion, l'épizootie s'est propagée en Hollande, et de la Hollande en Belgique.

La France est donc aujourd'hui ménacée. Il est urgent, monsieur le préfet, de se tenir en garde contre l'invasion possible de ce fléau, et de prendre dès maintenant toutes les mesures propres à arrêter son expansion dans notre pays s'il venait à franchir nos frontières, malgré le décret rendu par l'Empereur en date du Septembre et l'arrêté ministériel du 6 qui en fait suite.

J'ai l'honneur, en conséquence, de vous adresser une instruction relative à cette épizootie, afin de porter à la connaissance des vétérinaires, des autorités locales, des agriculteurs et des propriétaires ce qu'il est indispensable de savoir de sa nature et de son mode de propagation, et de vous rappeler les mesures de police sanitaire qui doivent immédiatement être mises en pratique dans toutes localités où son apparition serait signalée. L'histoire de cette épizootie, dont la France a déjà eu à souffrir dans le dernier siècle et dans le commencement du siècle actuel, montre qu'il est possible, sinon de s'en préserver toujours, du moins de réduire considérablement la proportion des pertes qu'elle peut causer, par l'application bien ordonnée des mesures de police sanitaire que prescrit notre législation sur la matière.

Je ne saurais donc, monsieur le préfet, vous recommander à cet égard une trop grande vigilance.

Le typhus contagieux des bêtes à cornes est une maladie étrangère à nos climats. Jamais il ne se développe spontanément dans les différentes contrés de l'Europe occidentale, quelles que soient, du reste, les mauvaises conditions hygiéniques auxquelles les troupeaux des grands ruminants puissent être exposés. C'est dans les plaines immenses de la Hongrie et de la Russie, qui sont connues sous le nom de *steppes*, que le typhus prend naissance; c'est là exclusivement qu'il trouve les conditions de son développement spontané; et telle est, à l'égard de cette question d'origine, la certitude acquise, depuis les savantes investigations des maîtres de la médecine vétérinaire en Russie, en Allemagne et en France, qu'on peut toujours affirmer, sans crainte d'erreur, quand on voit apparaître le typhus des bestiaux dans une région de l'Europe occidentale, qu'il y a été importé par une voie ou par une autre.

L'invasion actuelle de l'Angleterre ne fait pas exception à cette règle, quoi que l'on ait pu dire sur ce point de l'autre côté du détroit. Il est certain que c'est le typhus des steppes qui ravage ce pays, et qu'avant son apparition à Londres où il a fait sa première explosion, un convoi composé de trois cents animaux avait été embarqué à Revel, dans le golfe de Finlande, à destination pour l'Angleterre, et y était arrivé par Lubeck et Hambourg après une traversée de six jours environ, grâce à la rapidité des moyens de communication.

Le caractère exotique du typhus ne saurait donc aujourd'hui être contesté.

Mais si le typhus est exotique et ne prend naissance que dans la région des steppes, on le voit trop souvent déborder de son pays d'origine, à raison de ses propriétés éminemment contagieuses, et s'attaquer à la population bovine des contrées dans lesquelles ne se trouvent pas les conditions de son développement spontané. Ses routes les plus ordinaires ont été, dans le passé, celles qu'ont suivies les armées de l'Autriche et de la Russie, dont les troupeaux d'approvisionnements sont formés en grande partie d'animaux originaires des steppes. Plus rarement il s'est introduit par les voies commerciales de terre et de mer; mais c'est toujours par la contagion qu'il s'y est maintenu pendant un temps plus ou moins long, aux differentes époques où il y a fait son apparition.

La propagation du typhus d'une localité infestée dans une localité voisine ou même à grande distance, comme l'exemple de l'Angleterre en témoigne aujourd'hui, peut s'opérer par différents modes.

Le plus efficace de tous est le transport des animaux malades. Il suffit d'un seul sujet attaqué du typhus pour infecter tout un pays. Il n'est pas nécessaire d'un contact immédiat pour que sa transmission s'effectue; le typhus se transmet à distance par les émanations qui se dégagent des sujets malades; ces émanations ont assez de puissance pour agir en plein air.

Les germes morbides peuvent être portés à distance par les courants de l'atmosphère et infecter des troupeaux dans les pâturages, lorsque des animaux malades passent sur les routes qui les bordent.

Les animaux sains qui ont eu des rapports avec le animaux malades, et se sont imprégnés des principes de leur maladie, conservent encore les caractères extérieurs de la santé pendant un certain temps, dont la durée varie entre six et dix jours. C'est cette particularité, commune du reste à un grand nombre de maladies contagieuses, qui est une des conditions les plus puissantes de la propagation du typhus; car trop souvent les propriétaires des sujets contaminés, ne s'inspirant que de leur intérêt personnel, s'empressent de les faire conduire sur les foires et marchés pour réaliser immédiatement leur valeur et se mettre à couvert des pertes qu'ils pourraient subir. De là la dissémination possible et trop fréquente, du mal dans tous les sens par ses sujets qui, sous les apparences de la santé, recèlent en eux le germe d'une maladie encore cachée, mais dont l'avènement est fatal et à bref délai. L'histoire de l'épizootie actuelle de l'Angleterre démontre que c'est surtout par cette voie que le typhus a rayonné de la métropole dans un grand nombre des districts qui l'avoisinent, puis, de proche en proche, dans les districts plus éloignés, et enfin jusque dans l'Ecosse.

Ce ne sont pas seulement les animaux actuellement malades, ou qui doivent le devenir prochainement, qui sont les agents de la propagation du typhus; ceux qui sont en convalescence de cette maladie peuvent aussi la transmettre et avec tous les caractères de sa malignité, bien que chez eux elle paraisse éteinte. Le typhus peut être transmis par les fourrages imprégnés du souffle et de la bave des animaux malades, par les herbes, des pâturages où ils ont sejourné, par les liquides dont ils se sont abreuvés.

Les vêtements des hommes, la toison des moutons, les poils des chiens et des autres animaux peuvent se charger des principes de la maladie et la transporter à distance.

Enfin, elle peut se propager par les fumiers qui proviennent des étables infectées et dans la composition desquels les déjections morbides entrent en si grande quantité, par les débris des animaux morts, par leurs peaux fraîches et jusque par les cordages qui ont servi à les attacher et qui sont encore souillés de leur bave ou de leur sang.

Comme on le voit par cet aperçu sommaire, les voies sont nombreuses par lesquelles la contagion du typhus peut s'effectuer, et c'est leur multiplicité qui explique la facilité avec laquelle cette maladie se propage et les difficultés que l'on rencontre trop souvent à empêcher son expansion. Mais ces difficultés, si grandes qu'elles soient, ne sont pas supérieures aux efforts d'une administration vigilante et dévouée, et il est possible de les surmonter quand on s'attaque au fléau dès ses premières manifestations dans une localité.

Le typhus étant une maladie exotique que très-peu de personnes en France ont eu l'occasion d'observer, puisque sa dernière invasion remonte à 1814, il est nécessaire d'en retracer ici les caractères principaux.

Caractères du Typhus contagieux.

Dans la première période de cette maladie celle que l'on appelle la période d'incubation, parce que le mal n'est encore qu'en germe dans le corps et y couve pour ainsi dire, les animaux présentent tous les caractères extérieurs de la santé; ils mangent, boivent, et ruminent comme d'habitude, et les femelles donnent la même quantité de lait. Impossible donc de voir en eux des malades; et, de fait, s'ils sont condamnés à le devenir fatalement, ils ne le sont pas encore.

Cette période a une durée qui varie de six à dix jours.

Lorsque la maladie apparaît, elle se caractérise par l'abattement et une certaine expression du regard qui donne à l'animal un air sombre; sa tête est tendu, fixe, portée bas, avec les oreilles immobiles tombant en arrière; le dos est voussé et les membres postérieurs sont engagés sous le corps; le poil est terne, hérissé et sec au toucher; aux plis des jointures, notamment dans la région des aisselles et des aînes, la peau se trouve mouillée de sueurs qui déterminent le soulèvement de son épiderme et sa dénudation.

La rumination n'est pas toujours suspendue dans les premiers jours de la maladie, mais elle ne s'effectue plus avec sa régularité habituelle; l'animal grince des dents et bâille fréquemment.

Puis apparaissent des tremblements généraux, manifestés surtout en arrière des épaules, aux grassets et aux fesses avec des alternatives de chaleur et de froid, notamment vers la base des cornes, aux oreilles et aux extrémités des membres.

Les yeux sont rouges et pleurent, et les larmes qui s'en écoulent en abondance ont une telle âcreté qu'elles creusent sur le chanfrein une sorte de sillon; l'epidermie se détache sur les régions de la peau où elles se sont répandues.

Un jetage a lieu par les ouvertures des narines, d'un liquide d'abord aqueux et âcre comme les larmes et produisant, comme elles, l'érosion épidermique des parties de la peau avec lesquelles il reste en contact.

Avec les progrès de la maladie, les humeurs des yeux ou du nez deviennent purulentes, et souvent alors l'air que les animaux expirent est fétide. A ce moment la respiration se précipite, elle devient difficile et s'accompagne d'un bruit de cornage que l'on entend à distance, en entrant dans les étables.

De la bouche s'échappe une salive écumeuse, qui forme des flocons blanchâtres autour des lèvres. Sur le bourrelet

de la mâchoire supérieure, sur les gencives et sur les mamelons de la face interne des joues, l'épiderme soulevé par de la sérosité, n'adhère plus aux parties et, se détachant facilement sous la pression des doigts, laisse à nu des plaies vives d'un rouge foncé.

A une période plus avancée de la maladie, la tête est agitée, d'un côté à l'autre, d'une sorte de branlement qui a une certaine analogie avec celui des vieillards, et, en même temps, les mouvements rapides de la respiration lui impriment, à chaque fois que les flancs s'abaissent, une secousse de bas en haut.

La diarrhée ne tarde pas à se manifester; ce sont d'abord des matières excrémentielles qui sont expulsées liquides, avec une grande impétuosité, et associées à des gaz qui leur donnent une fétidité caractéristique; puis, quand le canal est vide, les produits des déjections deviennent séreux; enfin, à la dernière période, les matières rejetées prennent une teinte brune qu'elles doivent au sang qui leur est associé, et répandent une odeur d'une extrême fétidité.

A mesure que la maladie progresse, l'affaiblissement des forces s'accuse davantage; les malades tombent dans un état d'extrême prostration; c'est à peine s'ils peuvent se tenir debout et s'ils ont la force de conserver l'équilibre, quand on les oblige, par l'excitation des aiguillons ou des chiens, à se mettre en mouvement. La plupart du temps, ils restent couchés, la tête tendue et appuyée sur le menton. La stupeur est extrême; les yeux s'enfoncent profondément dans les orbites; une humeur purulente remplit le vide qui s'est formé entre le globe et les paupières; la matière du jetage, épaisse, mêlée de stries sanguinolentes, souvent fétide, obstrue tellement les narines que les animaux sont obligés de respirer par la bouche; la température du corps est sensiblement abaissée, et quand on appose les mains sur la peau du dos et des lombes, on perçoit une sensation analogue à celle que donne le toucher d'un animal à sang froid. Souvent, à cette période, se manifeste un symptôme très-caractéristique, c'est un gonflement de chaque côté de l'épine du dos, déterminé par le développement spontané de gaz sous la peau. Quand on palpe cette région, on perçoit une sensation de crépitation, et si on la percute, elle rend un son analogue à celui qui se fait entendre lorsque, dans les boucheries, on frappe sur la peau d'un bœuf soufflé.

Quand ce symptôme est apparu, les animaux sont froids et insensibles; les mouches les couvrent comme si déjà ils étaient des cadavres. Elles s'accumulent autour des ouvertures naturelles et y déposent leurs œufs, qui quelquefois ont le temps d'y éclore: d'où l'apparition d'un fait qui a été considéré autrefois comme une expression spéciale de la maladie, mais qui n'est évidemment qu'un accident secondaire, résultant de l'état d'insensibilité à peu près complète dans lequel les animaux sont tombés.

La sécrétion du lait se tarit presque entièrement dès les premiers signes de la maladie; les mamelles se flétrissent et deviennent flasques et froides; quand elles donnent encore un peu de lait, ce liquide est séreux et d'une teinte jaune très-accusée.

Chez les femelles, il existe un symptôme très-propre à faciliter le diagnostic de la maladie, lorsqu'on doit passer en revue un certain nombre de bêtes et formuler un jugement rapide, c'est la coloration particulière de la membrane du vagin, qui a une teinte rouge d'acajou avec des marbrures d'une nuance plus foncée.

L'amaigrissement rapide et profond des malades est un des caractères particuliers à cette affection, et qui s'accuse à un degré d'autant plus marqué que la vie se prolonge davantage; les sujets deviennent étiques; leurs muscles, effacés et parcheminés, laissent apparaître tous les reliefs du squelette, notamment à la région du bassin, dont les excavations se creusent profondément.

La mort survient d'ordinaire du troisième au douzième jour, rarement la vie se prolonge au delà de cette dernière période.

En résumé, si on laisse de côté les détails accessoires, un animal frappé du typhus se reconnaît facilement à l'ensemble des symptômes suivants: attitude immobile, dos voûté, membres convergents sous le corps, tête portée en avant, fixe, oreilles tombantes en arrière, regard sombre, yeux pleureurs, jetage nasal, bouche écumeuse, tête branlante, grincement des dents, respiration précipitée, bruit de cornage, tremblements généraux, diarrhées très-abondantes et fetides, gonflement de la région dorsale par des gaz accumulés sous la peau, abaissement de la température du corps, faiblesse extrême, prostration, stupeur, coloration rouge foncé avec marbrures de la membrone du vagin, tarissement du lait.

Altérations propres au Typhus.

Dans le troisième estomac ou feuillet, injection des lames multiples de cet appareil, taches ecchymotiques diffuses sur un grand nombre, perforations ulcéreuses de quelques-unes, dessiccation, sous forme de galettes, des matières alimentaires interposées entre elles.

Dans la caillette, quatrième estomac, injection très-vive de toutes ses duplicateurs qui ont une couleur rouge d'acajou, et, dans quelques cas, ulcérations multiples disséminées à leur surface; ces ulcérations reflètent une teinte blanche lavée.

Dans l'intestin grêle, plaques gaufrées formées par la confluence de pustules pleines ou ulcérées sur les glandes de Peyer.

Cette lésion n'est pas constante dans l'intestin grêle; mais ce que l'on observe toujours sur la muqueuse de cet intestin, c'est l'injection générale avec des vergetures longitudinales, coupées irrégulièrement par des vergetures transverses, qui dessinent sur la membrane un réseau irrégulier à grandes mailles extrêmement caractérisé.

Dans le colon, petites ulcérations extrêmement nombreuses, dans le profondeur desquelles est attaché un petit caillot de sang formant relief dans l'intestin; en enlevant ce caillot par le grattage, on met à nu l'ulcération assez profonde qui lui servait comme de point d'insertion. Injection générale de toute la muqueuse du colon et de celle du rectum, vergetée et aréolée comme la muqueuse de l'intestin grêle.

La rate est généralement saine.

Taches pétéchiales et ecchymoses profondes dans le cœur.

Emphysème général du poumon, dont les lobules sont isolés entre les lames épaisses du tissu cellulaire, qui sont soufflées par les gaz exhalés dans leurs aréoles comme dans celles du tissu cellulaire sous-cutané.

Injection de la muqueuse des bronches et du larynx, et exsudation à sa surface de mucosités purulentes condensées en fausses membranes dans le larynx.

Aucune ulcération sur cette membrane.

Le typhus contagieux des bêtes a cornes est une maladie qui demeure supérieure dans le plus grand nombre des cas, l'expérience l'a trop souvent démontré, à toutes les ressources de l'art. Ce n'est donc pas sur des moyens de traitement qu'il faut compter pour sauvegarder la fortune des particuliers et, avec elle, la fortune publique, lorsque cette épizootie s'attaque à la population bovine d'un pays, mais bien sur les précautions les plus minutieuses prises en vue d'empêcher sa propagation par les différentes voies de la contagion.

Les indications donnés dans cette instruction doivent vous inspirer à cet égard, monsieur le préfet, votre ligne de conduite.

Tous vos efforts doivent tendre, lorsque l'épizootie s'est déclarée dans une localité, à empêcher que les animaux malades puissent avoir des communications, de quelque nature qu'elles soient, avec des animaux sains. Vous ne devrez même pas reculer, au début de la maladie dans une contrée, devant l'abatage immédiat des animaux les premiers malades et des animaux qui ont cohabité avec eux, si vos informations vous renseignent très-exactement sur la manière dont la maladie s'est transmise, et si elles vous donnent la conviction qu'en l'étouffant dans son foyer primitif, vous pourrez arrêter son expansion et prevenir sa propagation.

La loi vous arme de toute l'autorité nécessaire pour appliquer cette mesure commandée par l'intérêt public, et dont l'application entraîne, du reste, l'indemnisation légitime des propriétaires.

La contagion pouvant s'effectuer à distance par les émanations qui se dégagent du corps des animaux malades, il est nécessaire qu'ils soient sequestrés de la manière la plus rigoureuse dans des locaux aussi isolés que possible de ceux qu'habitent les animaux sains; que les pâturages communs, les abreuvoirs et les routes leur soient défendus; que les personnes préposées à leur donner des soins n'aient aucun contact avec les animaux non encore infectés; que des relations ne puissent pas s'établir par l'intermédiaire d'animaux d'autres espèces, notamment des moutons, dont la toison touffue peut s'imprégner des principes contagieux et servir à les transporter à de très-grandes distances.

Dans des occurrences comme celles qui se présentent, l'agglomération des animaux de l'espèce bovine sur les champs de foire ou sur les marchés peut entraîner les conséquences les plus fâcheuses; car il suffit d'un seul animal infecté pour qu'un grand nombre de ceux qui auront été en rapport avec lui contractent la maladie et la disséminent dans une foule de directions. Il est possible aussi que des animaux, qui ne sont encore qu'à la période d'incubation de la maladie, soient conduits sur les champs de foire par des propriétaires plus soucieux de leurs intérêts particuliers que de l'intérêt public. Vous aurez à voir si la gravité des circonstances ne vous impose pas l'obligation de suspendre les foires et marchés publics dans les localités où l'épizootie sévira; et, dans le cas où cette mesure, toujours grave, ne vous paraîtrait pas indispensable, vous devriez prescrire les plus grandes précautions pour prévenir l'introduction sur

les marchés d'animaux suspects, à quelque titre que ce soit. Ces précautions devront consister dans des certificats de santé délivrés aux conducteurs des bestiaux par les maires des communes d'où ils proviennent et les vétérinaires inspecteurs de ces communes.

Mais l'action de l'administration, si énergique qu'elle soit, resterait insuffisante si vos administrés ne se pénétraient pas tous de la nécessité de concourir de tous leurs efforts à l'œuvre de la préservation commune, et s'ils n'étaient pas convaincus qu'il suffit souvent d'une imprudence commise ou d'une contravention aux règlements sanitaires pour que la maladie trouve une issue qui lui permettrait d'étendre ses ravages. Vous devrez donc faire en sorte d'éclairer les populations par tous les moyens de publicité dont vous disposez sur les dangers qui les menacent, et sur l'utilité des mesures que vous serez obligé de prendre pour les en préserver.

Voici, du reste, celles de ces mesures qu'il est urgent d'appliquer immédiatement :

Tout propriétaire, détenteur ou gardien de bêtes à cornes, à quelque titre que ce soit, doit être tenu de faire la déclaration immédiate au maire de la commune des bêtes malades ou suspectes qu'il peut avoir chez lui ou dans ses pâturages.

Dès que le maire sera prévenu, il fera faire la visite des animaux dont la maladie lui aura été déclarée, soit par le vétérinaire le plus prochain, soit par celui auquel cette fonction aura été assignée.

Je vous recommande, monsieur le préfet, d'insister auprès des maires des différentes communes de votre département, pour que cette prescription d'utilité absolue soit rigoureusement observée : elle est du reste imposée par les règlements sur la matière, et ceux qui y contreviendraient seraient passibles de peines sévères (1).

Lorsque, d'après le rapport du vétérinaire, il sera constate qu'une ou plusieurs bêtes sont malades, le maire veillera scrupuleusement à ce que ces animaux soient séparés des autres et ne communiquent d'aucune manière, directement ou indirectement, avec aucun animal de la commune. Les propriétaires, sous quelque prétexte que ce soit, ne pourront les faire conduire dans les pâturages ni aux abreuvoirs communs, et ils seront tenus de les nourrir dans des lieux renfermés.

Cette séquestration des malades ne saurait être pratiquée avec trop de rigueur : c'est d'elle que dépend le salut des autres bestiaux de la localité, et les maires, en tenant la main à l'observation rigoureuse de la règle, peuvent rendre à leurs concitoyens les plus grands services. Il faut donc qu'ils soient assez convaincus de la gravité de leurs devoirs pour ne pas se contenter de demi-mesures.

Chaque jour le maire de la commune où la maladie s'est déclarée doit vous adresser un rapport détaillé dans lequel il vous indiquera les noms des propriétaires dont les bestiaux sont atteints et le nombre des bêtes malades (2). Aussitôt que le maire aura acquis la preuve que l'épizootie s'est déclarée dans sa commune, il devra en instruire tous les propriétaires de bestiaux de ladite commune par une affiche posée aux lieux où se placent les actes de l'autorité publique, laquelle affiche enjoindra à ces propriétaires de déclarer à l'autorité communale le nombre de bêtes à cornes qu'ils possèdent, avec désignation d'âge de taille, de poil, etc.

Une copie de ces déclarations devra vous être envoyée, et vous aurez soin de la faire parvenir à mon administration (3).

Ce dénombrement est nécessaire pour que l'autorité supérieure puisse se rendre compte des pertes et apprécier les indemnités qui pourraient être allouées à ceux qui les auront subies.

Dès que l'épizootie s'est déclarée dans une commune, aucun des animaux, même ceux qui sont encore sains dans cette commune, ne peut en être distrait pour être conduit sur les foires et marchés et même chez des particuliers des communes voisines, car leur migration peut transporter la contagion à distance. Toute communication des bestiaux des localités infestées avez ceux des localitées qui ne le sont pas doit être absolument empêchée. Il doit être fait, en conséquence, des visites de temps à autre chez les propriétaires de bestiaux dans les communes infestées, pour s'assurer qu'aucun animal n'en a été éloigné (4).

Si, au mépris de ces dispositions, une bête malade ou suspecte, dans un pays infesté, était conduite sur un marché ou une foire, ou même chez un particulier d'une localité non infestée, l'auteur de cette contravention serait passible des peines portées par les articles du code pénal qui ont réglé cette matière.

Les propriétaires qui feraient conduire leurs animaux malades ou suspects par leurs domestiques ou autres personnes, dans les marchés ou les foires ou chez des particuliers de pays non infestés, seraient responsables des faits de ces conducteurs (5).

Les propriétaires de bêtes saines peuvent néanmoins, dans les pays infestés, en faire tuer chez eux ou en vendre aux bouchers de leurs communes, mais aux conditions suivantes :—

1° Il faut que le vétérinaire préposé par l'autorité ait constaté que ces bêtes peuvent être livrées sans danger à la consommation :

2° Le boucher doit tuer les bêtes dans les vingt-quatre heures :

3° Le propriétaire ne peut s'en dessaisir et le boucher les tuer, avant qu'ils n'en aient reçu, par écrit, la permission du maire, qui en fera mention sur son état :

4° Le boucher ne peut, sous aucun prétexte, vendre pour son compte et sur pied la bête qu'il aura achetée pour être immédiatement abattue.

Toute contravention à cet égard sera punie conformément aux lois et règlements sur la matière. Le propriétaire et le boucher sont solidaires (6).

L'expérience ayant appris que les chiens peuvent devenir des agents de la transmission de la contagion, ces animaux doivent être tenus à l'attache dans les localités infestés ; et il est ordonné de tuer tous ceux que l'on trouverait divaguants. (Loi du 19 Juillet 1791.—Arrête du Directoire exécutif du 27 Messidor an 5.)

Si, à la première apparition de l'épizootie dans une commune, l'autorité municipale jugeait nécessaire, pour étouffer la maladie avant qu'elle ait pris de l'extension, de faire abattre immédiatement les bestiaux malades et ceux qui auraient cohabité avec eux, elle pourrait prescrire cette mesure, en ayant soin de faire constater par des procès-verbaux le nombre et la valeur des animaux qui devraient être abattus.

Il va de soi que toutes les bêtes saines, sacrifiées pour prévenir la contagion dont elles peuvent receler les germes, pourront être livrées à la consommation comme bêtes de boucherie.

Les extraits des procès-verbaux d'abatage de ces animaux devront m'être addrésses, pour que mon administration puisse faire payer aux propriétaires l'indemnité à laquelle ils ont droit d'après la loi (7).

Les bêtes mortes des suites de l'épizootie, ou dont l'abatage aura été ordonné en raison de la gravité de leur maladie, devront être enfouies à une distance aussi grande que possible des habitations, dans des fosses de 2 mètres au moins de profondeur dans les terrains peu perméables et plus profondément encore dans les terrains dont la perméabilité est très-grande. Cette fosse sera recouverte de toute la terre qu'on en aura extraite.

S'il était possible de jeter au préalable sur les cadavres une couche de chaux vive, cete précaution serait excellente.

Les cuirs devront être tailladés avant que le corps soit placé dans la fosse, afin d'annuler leur valeur commerciale, pour que personne ne soit tenté de les déterrer. Les cadavres ne seront pas traînés vers le lieu de leur enfouissement, afin d'éviter qu'ils ne laissent sur le sol des matières recélant en elles le principe de la contagion. Ils devront être charriés sur des voitures traînées par des chevaux, des ânes ou des mulets, et ces voitures seront immédiatement lavées à grande eau, après avoir servi à cet usage.

Dans les localités où il existe des clos d'équarrissage ou des usines dans lesquelles les matières animales sont converties en produits industriels, les propriétaires seront libres, au lieu de faire enfouir les corps des bêtes mortes, de les faire exploiter par les établissements appropriés à cette destination, à la condition que la distance de leur propriété à ces établissements sera telle, que les corps des animaux morts ne devront pas traverser des localités non infestées.

Les fumiers provenant des étables infestées devront être enfouis.

Il ne faut pas oublier que les fourrages sur lesquels les bêtes malades ont soufflé et répandu leur bave, que les litières qu'elles ont souillées de leurs déjections, peuvent

(1) Arrêt du Parlement, 24 Mars 1745.—Arrêt du Conseil, 19 Juillet 1746.—Arrêt du Conseil, 16 Juillet 1784.—Décret de l'Assemblée constituante, 6 Octobre 1791.—Arrêté du Directoire exécutif, 27 Messidor an X.—Ordonnance du Roi du 15 Janvier 1815.—Code pénal, article 459.

(2) Arrêt du Conseil, 1746.—Décret de l'Assemblée constituante, 1791.—Code pénal, article 460.

(3) Arrêt du Conseil du 19 Juillet 1746.—Arrêté du Directoire exécutif du 27 Messidor an 5.

(4) Arrêt du Conseil du 24 Mars 1745.—Arrêté du Directoire exécutif du 27 Messidor an 5.

(5) Arrêt du Conseil du 7 Juillet 1746.—Code pénal, article 460.

(6) Arrêt du Conseil du 19 Juillet 1746.—Arrêté du Directoire exécutif du 27 Messidor an 5.

(7)

être des agents de la transmission de la contagion; les uns et les autres devront être traités comme les fumiers, après la mort de la bête à l'usage de laquelle ils ont servi; en pareil cas, une économie mal entendue peut être cause de nouvelles pertes.

Les étables qui ont été habitées par des bêtes malades doivent être assainies avec le plus grand soin, d'après les prescriptions des hommes de l'art. Le lavage à fond avec des liquides dont les propriétés désinfectantes sont reconnues, tels que le chlorure de chaux, l'eau de chaux chlorurée, les solutions d'acide phénique, les eaux de lessive, le grattage des râteliers et des mangeoires, leur revêtement avec une couche de goudron, le repiquage du sol et l'association à la terre qui le forme, de sable, de terre ou de plâtre coaltarés, enfin les fumigations chlorurées, voilà une série de moyens dont l'expérience a consacré l'efficacité, et qui doivent être scrupuleusement recommandés aux propriétaires des étables infestées: qu'ils demeurent bien convaincus que la dépense qu'ils s'imposeront pour assainir leurs étables sera largement compensée par le bénéfice qu'ils en retireront.

Même après ces précautions prises, il sera prudent de n'introduire des bêtes saines dans les étables infestées qu'après deux semaines au moins, pendant lesquelles on les aura laissées ouvertes à tous les vents.

Les objets qui auront servi à l'usage des bêtes malades devront être détruits par le feu, s'ils sont de minime valeur, comme les cordages d'attache, par example, ou purifiés par les procédés d'assainissement qui leur conviennent.

Telles sont, monsieur le préfet, les mesures diverses qu'il me paraît urgent de prendre pour empêcher l'extension de l'épizootie dans votre département, si elle venait à y pénétrer. Je ne saurais trop vous recommander de veiller à ce qu'elles soient partout scrupuleusement et rigoureusement appliquées. Si les efforts sont bien concertés, si chacun est à son poste et fait bien son devoir, on peut opposer à l'invasion du mal une digue qu'il ne franchira pas.

Du reste, monsieur le préfet, vous devez trouver de bons auxiliaires, pour l'application de tous les moyens propres à combattre l'épizootie, dans les sociétés vétérinaires, les chambres consultutives d'agriculture, les associations agricoles et les vétérinaires de votre département. Le décret du 18 Octobre 1848 a institué près de vous un conseil d'hygiène publique et de salubrité, dont une des attributions est relative aux épizooties et aux maladies des bestiaux. Mais il me paraîtrait très-utile que, pour répondre aux nécessités du moment, des commissions spéciales, composées plus particulièrement de vétérinaires et d'agriculteurs, fussent instituée partout où le besoin s'en ferait sentir et eussent pour mission d'approprier plus efficacement aux conditions locales les mesures de police sanitaire que comport l'epizootie.

Je désire, monsieur le préfet, que vous me teniez au courant, par des communications très-fréquentes, de tous les faits relatifs à l'épizootie qui pourraient se produire dans votre département.

Si les circonstances l'exigent, je vous transmettrai des instructions complémentaires de celles qui font l'objet de la présente circulaire.

Recevez, monsieur le préfet, les assurances de ma considération très-distinguée.

Le ministre de l'agriculture,
du commerce et des travaux publics,
ARMAND BÉHIC.

CODE PENAL.

ARTICLES 459, 460, 461, 462.

459. Tout détenteur ou gardien d'animaux ou de bestiaux soupçonnés d'être infectés de maladie contagieuse, qui n'aura pas averti sur-le-champ le maire de la commune où ils se trouvent, et qui même, avant que le maire ait répondu à l'avertissement, ne les aura pas tenus renfermés, sera puni d'un emprisonnement de six jours à deux mois, et d'une amende de seize francs à deux cents francs.

460. Seront également punis d'un emprisonnement de deux mois à six mois, et d'une amende de cent francs à cinq cents francs, ceux qui, au mépris des défenses de l'administration, auront laissé leurs animaux ou bestiaux infectés communiquer avec d'autres.

461. Si de la communication mentionnée au précédent article, il est résulté une contagion parmi les autres animaux, ce qui auront contrevenu aux défenses de l'autorité administrative seront punis d'un emprisonnement de deux ans à cinq ans, et d'une amende de cent francs à mille francs; le tout sans préjudice de l'exécution des lois et réglements relatifs aux maladies épizootiques, et de l'application des peines y portées.

462. Si les délits de police correctionnelle dont il est parlé au présent chapitre ont été commis par des gardes champêtres ou forestiers, ou des officiers de police, à quelque titre que ce soit, la peine d'emprisonnement sera d'un mois au moins, et d'un tiers au plus en sus de la peine la plus forte qui serait appliquée à un autre coupable du même délit.

ORDINANCE of the PREFECT of POLICE.

Paris, 27 Septembre.

Nous, préfet de police,

Considérant qu'une épizootie exerce actuellement ses ravages en Angleterre sur les animaux de l'espèce bovine, et que, de ce pays où elle était restée confinée d'abord, elle s'est propagée en Hollande et en Belgique;

Considérant qu'il est urgent de se tenir en garde contre l'invasion possible de ce fléau en prescrivant dès maintenant les mesures propres à arrêter son expansion, s'il venait à pénétrer en France:

Ordonnons ce qui suit:—

Article 1er. Tout propriétaire, détenteur ou gardien de bêtes à cornes atteintes ou présentant des symptômes du typhus contagieux, est tenu d'en faire la déclaration, savoir: dans les communes rurales de la préfecture de police, devant le maire, et à Paris devant le commissaire de police. (Art. 459 du Code pénal.)

Art. 2. Immédiatement après la dite déclaration, le maire ou le commissaire de police fera visiter par un vétérinaire les animaux suspects ou atteints de maladie.

Art. 3. Lorsque, d'aprés le rapport du vétérinaire désigné par l'autorité, il sera constaté qu'une ou plusieur bêtes sont malades, ces animaux seront séquestrés. (Arrêts du Conseil du 19 Juillet 1746, art. 2, et du 16 Juillet 1784, art. 4.)

Défense est faite aux propriétaires desdits animaux de les faire conduire, sous quelque prétexte que ce soit, dans les pâturages et aux abreuvoirs communs. (Arrêts ci-dessus rappelés.)

Art. 4. Dans les localités où il sera constaté que la maladie a fait invasion, les maires ou les commissaires de police mettront en demeure les propriétaires de bestiaux de déclarer à l'autorité le nombre de bêtes à cornes qu'ils possèdent, avec désignation d'âge, de taille, de poil, etc. (Arrêt du Conseil du 19 juillet 1746.)

Une copie de ces déclarations sera transmise à l'administration, ce dénombrement étant nécessaire pour que l'autorité supérieure puisse se rendre compte des pertes et apprécier les indemnités qui pourraient être allouées à ceux qui auraient subi ces pertes.

Art. 5. Chaque jour, le maire, dans les communes rurales où la maladie se sera déclarée, et, à Paris, le commissaire de police du quartier adresseront à la Préfecture de police un rapport detaillé dans lequel seront indiqués les noms des propriétaires dont les bestiaux auront été atteints et le nombre des bêtes malades. (Arrêt du conseil du 19 Juillet 1746.)

Art. 6. Toute communication des bestiaux des localités non atteintes est absolument interdite. Par conséquent, aucun des animaux, même de ceux qui sont encore sains, ne peut être conduit sur les foires et marchés et même chez des particuliers. (Arrêts du conseil des 19 Juillet 1746 et 16 juillet 1784.)

Art. 7. Il sera fait, par les soins de l'autorité locale, de fréquentes visites chez les propriétaires de bestiaux des localités infectées, pour s'assurer qu'aucun animal n'en a été éloigné.

Il est fait défense à toutes personnes de refuser l'entrée de leurs étables et écuries, et d'apporter aucun obstacle à ce qu'il soit procédé auxdites visites, dont il sera dressé procès-verbal. En cas de difficultés, les parties intéressées pourront faire tels dires et réquisitions qu'elles aviseront, et il y sera statué provisoirement et sans délai par l'officier municipal qui aura prescrit la visite. (Arrêt du Parlement du 24 Mars 1745, etc.)

Art. 8. Les propriétaires qui feraient conduire par leurs domestiques ou autres personnes sur les marchés, sur les foires ou chez des particuliers de localités non infectées, des animaux malades ou suspects, seront responsables des faits de ces conducteurs. (Arrêt du Conseil du 7 Juillet 1746 et art. 460 due Code penal.)

Art. 9. Les propriétaires de bêtes saines pourront, dans les localités atteintes par la maladie, les vendre pour être abattues dans les établissements autorisés *ad hoc*, mais aux conditions suivantes:—

1° Un vétérinaire, désigné par l'autorité, dressera un procès-verbal constatant que ces bêtes peuvent être livrées, sans danger, à la consommation:

2° A Paris, ce procès-verbal sera visé par le commissaire de police, qui le transmettra à l'inspecteur de l'abattoir où la bête sera conduite:

3° Dans les communes, le procès-verbal sera adressé au maire, qui permettra l'abattage des animaux dans une tuerie autorisée :

4° L'abattage aura lieu dans les vingt-quatre heures :

5° Le boucher ne pourra, sous aucun prétexte, revendre sur pied la bête achetée pour être immédiatement abattue. (Arrêt du Conseil du 19 Juillet 1746.)

Art. 10. A la première apparition de l'epizootie dans une localité, mais après examen et procès-verbal dressé par les hommes de l'art, l'autorité pourra, si elle le juge convenable, afin d'étouffer la maladie avant qu'elle ait pris de l'extension, faire abattre immédiatement les bestiaux malades et ceux qui auraient cohabité avec eux, en ayant soin de constater par des procès-verbaux le nombre et la valeur des animaux qui devraient être abattus.

Les bêtes reconnues saines, qui auraient été abattues, pourront être livrées à la consommation.

Les extraits des procès-verbaux d'abattage de ces animaux seront adressés à la Préfecture de police, pour être transmis à S. Exc. le Ministre de l'agriculture, du commerce et des travaux publics.

Art. 11. Dans les communes rurales du ressort de la préfecture de police, les bêtes mortes des suites de l'épizootie ou dont l'abattage aura été ordonné en raison de la gravité de leur maladie devront être enfouies loin des habitations, dans des fosses de deux mètres au moins de profondeur et recouvertes de toute la terre extraite de ces fosses, à moins que les cadavres de ces animaux ne soient transportés dans des usines où les matières animales soient converties en produits industriels.

Les cuirs devront être tailladés avant que le corps ne soit placé dans la fosse, pour que personne ne soit tenté de les déterrer.

Il devra en être de même si les cadavres sont conduits dans une usine.

Art. 12. A Paris, let bêtes mortes de l'épizootie, ou dont l'abattage aura été ordonné comme atteintes de la maladie, seront transportées au clos d'équarrissage municipal d'Aubervilliers on dans des établissements autorisés à convertir en engrais les matières animales.

Art. 13. Le transport des animaux morts de l'épizootie ou abattus comme malades, ne pourra s'effectuer, de la localité à la fosse ou dans l'une des usines ci-dessus designées, que dans des voitures hermétiquement closes et construites conformément aux prescriptions des règlements concernant le transport des matières insalubres.

Ces voitures seront tenues en constant état de propreté, au moyen de lavages pratiqués avec des liquides désinfectants.

Art. 14. Les fumiers provenant des étables infecteés devront être enfouis.

Il en sera de même des fourrages et litières ayant servi à l'usage de bêtes mortes de maladie.

Art. 15. Les chiens pouvant devenir des agents de transmission de la contagion, ces animaux seront tenus à l'attache dans les localités infectées, et il est ordonné de tuer tous ceux qu'on trouvera circulant sur la voie publique. (Loi du 19 Juillet 1791.)

Art. 16. Les étables et autres locaux dans lesquels auront séjourné les animaux atteints de la maladie seront assainis, à la diligence des maires ou des commissaires de police.

Ces locaux ne pourront être occupés qu'après qu'il aura été constaté, en présence d'un expert vétérinaire, que les causes d'infection n'existent plus.

Art. 17. Les contraventions aux dispositions de la présente ordonnance seront constatées par des procès-verbaux qui nous seront adressés pour être transmis aux tribunaux compétents.

Art. 18. La présente ordonnance sera imprimée et affichée.

Les sous-préfets des arrondissements de Sceaux et Saint-Denis, les maires et les commissaires de police des communes rurales du ressort de la Préfecture de police, les commissaires de police de Paris, le chef de la police municipale, l'inspecteur général des halles et marchés, l'inspecteur contrôleur de la fourrière et les autres préposés de la Préfecture de police sont chargés, chacun en ce qui le concerne, de tenir la main à son exécution.

Le préfet de police,
BOITELLE.

BELGIUM.

INSTRUCTIONS issued by the MINISTER of the INTERIOR, entitled NOTICE SUR LA PESTE BOVINE.

(Transmitted by Lord Howard de l'Waden.)

La peste bovine, ou typhus contagieux, est la maladie la plus meurtrière qui atteigne les bêtes à cornes. L'expérience a prouvé que de cent animaux chez lesquels elle se développe, il n'y en a pas dix qui échappent à la mort. Etrangère à nos climats, elle ne naît jamais spontanément chez nos bestiaux. Ceux-ci la reçoivent toujours par contagion des bêtes bovines qui vivent en grands troupeaux dans les steppes de la Russie et de la Hongrie, où elle est enzootique.

Il suffit d'un seul animal attaqué par le typhus pour infecter tout un pays. La maladie se transmet nonseulement par contact immédiat, mais encore par contact indirect; les émanations qui se dégagent des bestiaux atteints la communiquent à d'assez grandes distances, même en plein air; elle se propage aussi par l'intermédiaire d'animaux qui, ne l'ayant encore eux-mêmes qu'en germe, peuvent conserver toutes les apparences de la santé pendant cinq à dix jours et même davantage. Les bêtes en convalescence la communiquent, de même que les fourrages imprégnés du souffle et de la bave des animaux malades, les herbes des pâturages où ils ont séjourné et les liquides dont ils se sont abreuvés.

Les vêtements des hommes, la toison des moutons,* les poils des chiens et des autres animaux peuvent se charger des principes de la maladie et la transporter à distance.

Enfin, elle peut se propager par les fumiers qui proviennent des étables infectées et dans la composition desquels les déjections morbides entrent en si grande quantité, par les débris des animaux morts, par leurs peaux fraîches, et jusque par les cordages qui ont servi à les attacher et qui sont encore souillés de leur bave ou de leur sang.

Symptomes.

Lorsque le typhus a frappé une bête bovine, on le reconnaît assez facilement à l'ensemble des symptômes suivants: attitude immobile, dos voûté, membres convergents sous le corps, tête portée en avant, fixe, oreilles tombantes en arrière, regard sombre, yeux pleureurs, jetage nasal, bouche écumeuse, tête branlante, grincement des dents, respiration précipitée, bruit de cornage, tremblements généraux, diarrhées très-abondantes et fétides, gonflement de la région dorsale par des gaz accumulés sous la peau, abaissement de la température du corps, faiblesse extrême, prostration, stupeur, coloration rouge foncé (couleur acajou) avec marbrures de la membrane du vagin, tarissement du lait.

Il y a d'ailleurs un moyen sur de confirmer un diagnostic douteux, c'est de remonter à la source de la maladie. Comme celle-ci ne naît jamais spontanément chez nos bestiaux et qu'elle se transmet toujours par contagion, il suffit de constater si du bétail, récemment importé de la Hollande, source exclusive du typhus en Belgique, a été en contact direct ou indirect avec des animaux infectés. Dans l'affirmative, il y a à peu près certitude que c'est à la peste bovine qu'on a affaire; dans le cas contraire, on peut croire qu'on s'est trompé sur la nature des symptômes observés. Du reste, lorsqu'il y a doute, l'autopsie fournira des indices certains pour le lever. C'est pourquoi on énumère ci-après en détail les altérations constatées chez les animaux morts par suite de la peste bovine.

Altérations propres au typhus.

Dans le troisième estomac ou feuillet, injection des lames multiples de cet appareil, taches ecchymotiques diffusés sur un grand nombre, perforations ulcéreuses de quelques-unes, dessication sous forme de galettes, des matières alimentaires interposées entre elles.

Dans la caillettée, quatrième estomac, injection très-vive de toutes ses duplicatures, qui ont une couleur rouge d'acajou, et, dans quelques cas, ulcérations multiples disséminées à leur surface; ces ulcérations reflètent une teinte blanche lavée.

Dans l'intestin grêle, plaques gaufrées formées par la confluence de pustules pleines ou ulcérées sur les glandes de Peyer.

Cette lésion n'est pas constante dans l'intestin grêle; mais ce que l'on observe toujours sur la muqueuse de cet intestin, c'est l'injection générale avec des vergetures longitudinales, coupées irrégulièrement par des vergetures transverses, qui dessinent sur la membrane un réseau irrégulier à grandes mailles extrêmement caracterisé.

Dans le colon, petites ulcérations extrêmement nombreuses et assez profondes. Injection générale de toute la muqueuse du colon et de celle du rectum, vergetée et aérolée comme la muqueuse de l'intestin grêle.

La rate est généralement saine.

Taches pétéchiales et ecchymoses profondes dans le cœur.

Emphysème général du poumon, dont les lobules sont isolées entre les lames épaisses du tissu cellulaire, qui sont

* Des vétérinaires instruits prétendent même que le typhus peut se transmettre des bêtes bovines aux moutons et aux chèvres. Quoi qu'il en soit de cette opinion, il faut éviter la cohabitation de ces derniers animaux avec des bêtes à cornes infectées.

soufflés par les gaz exhalés dans leurs aréoles comme dans celles du tissu cellulaire sous-cutané.

Injection de la muqueuse des bronches et du larynx, et et exsudation à sa surface de mucosités purulentes condensées en fausses membranes dans le larynx.

Traitement.

Le typhus n'est pas accessible aux ressources de l'art. Si quelques guérisons se produisent de loin en loin, elles sont si rares que, sans une grands imprudence, on ne saurait chercher de ce côté les moyens de conserver le bétail d'un pays infesté. Les mesures où il faut avant tout chercher le salut, ce sont celles qui peuvent avoir pour effet d'empêcher la propagation de la maladie par les différentes voies de la contagion.

Voici ces mesures, indiquées par paragraphes numérotés pour qu'on puisse plus facilement s'y retrouver.

MESURES DE POLICE SANITAIRE.*

§ 1. Tout propriétaire, détenteur ou gardien de bêtes à cornes, à quelque titre que ce soit, est tenu de faire la déclaration immédiate, au bourgmestre de la commune, des bêtes malades ou suspectes qu'il peut avoir chez lui ou dans ses pâturages.

§ 2. En attendant la décision du bourgmestre, il doit les tenir renfermées et isolées de manière qu'elles ne puissent avoir aucune communication ni avec ses bestiaux encore sains ni avec ceux d'autrui.

§ 3. Il est tenu aussi d'appeler immédiatement le médecin vétérinaire pour faire constater l'état de son bétail.

§ 4. Doivent être considérés comme suspects, aux termes de la loi, les bestiaux qui ont été en contact direct ou indirect avec des animaux malades.

§ 5. Les propriétaires de bétail qui ne remplissent pas les prescriptions mentionées aux §§ 1, 2, et 3, encourent, selon les cas, des amendes de 16 à 1,000 fr. et un emprisonnement de six jours à cinq ans; ils perdent de plus tout droit à l'indemnité qui est accordée en cas d'abatage des bestiaux malades ou suspects.

§ 6. Dès que le bourgmestre est prévenu de l'existence d'une maladie contagieuse ou suspecte dans une ferme ou dans un pâturage de sa commune, il doit immédiatement faire visiter le bétail qui lui est signalé par le médecin vétérinaire du gouvernement, si déjà cette visite n'a pas eu lieu à la demande du propriétaire.

§ 7. En attendant le résultat de cette visite, le bourgmestre doit faire isoler, si cela n'a pas déjà eu lieu, les bestiaux malades, en prescrivant que les animaux suspects, à raison de leur contact avec ces derniers, soient tenus enfermés dans l'étable où ils se trouvent, et mieux encore dans un local autre que celui où la maladie s'est développée. Cet isolement et cette séquestration seront, en tout cas, complets, et il ne pourra y être rien modifié sans des ordres formels soit du bourgmestre, soit de l'autorité supérieure.

§ 8. Lorsque le bétail est du pâturage, l'isolement est également obligatoire, et, s'il est impossible sur le pré même, les bestiaux suspects devront être enfermés dans des étables appropriées.

§ 9. Quand il résultera au rapport du vétérinaire qu'une ou plusieurs bêtes sont atteintes du typhus contagieux, le bourgmestre donnera l'ordre immédiat de les faire abattre en présence d'un officier de police, après avoir fait constater leur valeur par deux experts nommés et assermentés par lui.

§ 10. Le bourgmestre ou le médecin vétérinaire doivent, en tout cas, singnale *de suite et par voie directe* au gouverneur de la province, les faits qu'ils ont observés, en indiquant:

1° Le nombre des bestiaux abattus;

2° Le nombre de ceux qui, à l'étable, au pâturage ou ailleurs, ont été en communication médiate ou immédiate avec les malades;

3° Les dispositions prises à l'égard de ces derniers.

§ 11. Le bourgmestre agira ensuite à l'égard des animaux suspects, à raison de leur contact direct ou indirect avec des bêtes infectées, selon les instructions qui lui seront transmises par le gouverneur. En attendant, ces bestiaux devront rester séquestrés, comme il est dit aux §§ 7 et 8, et visités tous les jours par un officier de police, chargé de faire rapport au bourgmestre.

§ 12. En tout cas, les cadavres des bestiaux malades, qu'ils soient morts naturellement ou qu'ils aient été abattus, doivent être enfouis à une distance aussi grande que possible des habitations, dans des fosses de deux mètres au moins de profondeur dans les térrains peu perméables, et plus profondément encore dans les terrains dont la perméabilité est très-grande. Cette fosse sera recouverte de toute la terre qu'on en aura extraite.

§ 13. S'il était possible de jeter au préalable sur les cadavres une couche de chaux vive, il faudrait user de cette précaution.

§ 14. Les peaux devront être tailladées avant que le corps soit placé dans la fosse, afin d'annuler leur valuer commerciale, pour que personne ne soit tenté de les déterrer. Les cadavres ne seront pas traînés vers le lieu de leur enfouissement, afin d'éviter qu'ils ne laissent sur le sol des matières recélant en elles le principe de la contagion. Ils devront être charriés sur des voitures traînées par des chevaux, et ces voitures seront immédiatement lavées à grande eau, après avoir servi à cet usage.

§ 15. Il est utile que le médecin vétérinaire du gouvernement dirige ces diverses opérations, de même que celles que sont nécessaires pour purifier et assainir les étables.

§ 15. Des que le bourgmestre aura acquis la preuve que l'épizootie s'est déclarée dans sa commune, il devra en instruire tous ceux de ses administrés qui ont du bétail, par affiche ou autrement, en leur enjoignant de déclarer immédiatement à l'autorité locale le nombre de bêtes à cornes qu'ils possèdent, avec désignation d'âge, de taille, de poil, etc.

§ 16. Les habitants des communes infectées doivent être informés en même temps que, en vertu de la loi et sous peine de 100 à 500 francs d'amende, ils ne peuvent conduire aucun de leurs animaux, même sains, aux foires et marchés, ni aux pâturages communs ou même chez des particuliers, dans les localités voisines. Toute communication des bestiaux des communes infectées avec ceux des localités qui ne le sont pas doit être absolument empêchée. Il doit être fait, en conséquence, des visites de temps à autres chez les propriétaires de bestiaux dans les communes infectées, pour s'assurer qu'aucun animal n'a été distrait de leur troupeau.

§ 17. Si, au mépris de ces dispositions, une bête malade ou suspecte, dans un pays infecté, était conduite sur un marché ou une foire, ou même chez un particulier d'une localité non infectée, l'auteur de cette contravention serait passible des peines portées par les articles du Code pénal qui ont réglé cette matière, et le bétail devrait être abattu.

§ 18. Les propriétaires qui feraient conduire leurs animaux malades ou suspects par leurs domestiques ou d'autres personnes, dans les marchés ou les foires, ou dans des localités non infectées, seraient responsables des faits de ces conducteurs.

§ 19. Les propriétaires de bêtes saines peuvent néanmoins, dans les pays infectés, en faire tuer chez eux ou en vendre aux bouchers, mais aux conditions suivantes:

1° Il faut que le vétérinaire du gouvernement ait constaté que ces bêtes peuvent être livrées sans danger à la consommation;

2° Le boucher doit tuer et dépecer les bêtes sur place et dans les vingt-quatre heures;

3° Le propriétaire ne peut s'en dessaisir et le boucher les tuer, avant qu'ils en aient reçu, par écrit, la permission du bourgmestre, qui en fera mention sur son état;

4° Le boucher ne peut, sous aucun prétexte, vendre pour son compte et sur pied la bête qu'il aura achetée pour être immédiatement abattue.

Toute contravention à cet égard sera punie conformément aux lois et règlements sur la matière. Le propriétaire et le boucher sont solidaires.

§ 20. Les propriétaires jouissent de la même faculté de disposer des bêtes qui sont devenues suspectes par suite de leur contact avec des animaux malades, lors même que l'abatage a été ordonné par l'autorité.

Seulement, dans ce cas, outre les précautions indiquées au § 19, il faut que la peau tailladée et les autres débris soient enfouis conformément aux prescriptions des §§ 12, 13 et 14, et que le transport de la viande se fasse de manière que la salubrité publique ne puisse pas avoir à en souffrir.

§ 21. L'expérience ayant appris que les chiens peuvent devenir des agents de transmission de la contagion, ces animaux doivent être tenus à l'attache dans les localités infectées; et il est ordonné de tuer tous ceux que l'on trouverait divagants.

§ 22. Les bourgmestres des communes qui, sans être infectées, peuvent avoir à craindre l'invasion de la maladie, à raison de leur voisinage avec des localités où règne le typhus, doivent prescrire le recensement du bétail, comme il est dit au § 15, et ne laisser introduire sur leur territoire

* Toutes ces mesures sont prescrites par les lois et les règlements sur la police sanitaire des animaux domestiques. Celles de ces dispositions légales qui sont obligatoires en Belgique sont: 1° les arrêts du Conseil d'Etat du 19 Juillet 1746 et du 16 Juillet 1784: 2° le décret du 28 Septembre 6 Octobre 1791: 3° l'arrêté du 27 messidor an V, rendant obligatoire la circulaire ministérielle du 23 du même mois; 4° les art. 459, 460, 461, et 462 du code pénal; 5° l'arrêté royal du 22 Mai 1854, modifié, en ce qui concerne le typhus contagieux, par l'arrêté royal du 3 Septembre 1865 et par l'arrêté ministériel du même jour.

aucune bête, avant que celle-ci ait été visitée par un médecin vétérinaire. En cas de maladie, l'abatage doit être ordonné par l'autorité compétente, et lors même que le bétail est sain, le séjour dans la commune ne doit être permis que sous reserve qu'il sera isolé pendant dix jours au moins.

§ 23. Comme il importe que les propriétaires soient indemnisés pour le bétail sacrifie dans l'intérêt public, il leur sera alloué: 1° une indemnité des deux tiers de la valeur de chaque bête malade et abattue; 2° une idemnité équivalente, outre la faculté de disposer de la viande, conformément aux §§ 19 et 20, pour chaque bête suspecte par suite de son contact avec les animaux infectés.

Cette indemnité ne sera toutefois allouée que pour autant que les propriétaires aient rempli les obligations rappelées aux §§ 1, 2, et 3.

§ 24. Le bourgmestre devra transmettre immédiatement au gouverneur de la province sa proposition d'indemnité, en y joignant: 1° l'ordre d'abatage donné par lui ou par toute autre autorité compétente, avec le rapport du vétérinaire qui l'a provoqué; 2° le procès-verbal d'expertise; 3° le certificat d'abatage,—le tout conformément aux dispositions qui existent en cette matière.

§ 25. Les fumiers provenant des étables infectées devront être enfouis.

§ 26. Comme les fourrages sur lesquels les bêtes malades ont soufflé et répandu leur bave, et les litières qu'elles ont souillées de leur déjections, peuvent être des agents de transmission de la contagion, les uns et les autres devront être détruits ou enterrés. Le lavage a fond des étables avec des liquides dont les propriétés désinfectantes sont reconnues, tels que le chrorure de chaux, l'eau de chaux chlorurée, les solutions d'acide phénique, les eaux de lessive, le grattage des rateliers et des mangeoires, leur revêtement avec une couche de goudron, le repiquage du sol et l'association à la terre qui le forme, de sable, de terre ou de plâtre coaltarés, enfin les fumigations chlorurées, voilà une série de moyens dont l'experience a consacré l'efficacité.

§ 27. Même après ces précautions prises, il sera prudent de n'introduire des bêtes saines dans les étables infectées qu'après deux semaines au moins, pendant lesquelles on les aura laissées ouvertes à tous les vents.

§ 28. Les objets qui auront servi à l'usage des bêtes malades devront être détruits par le feu, s'ils sont de minime valeur, comme les cordages d'attache, par exemple, ou purifiés par les procédes d'assainissement qui leur conviennent.

Sans l'exécution sévère dispositions mentionnées ci-dessus, la propagation du typhus dans le pays ne saurait être empêchée. Cette exécution dépend avant tout des propriétaires de bestiaux et des administrations locales. Si les premiers ne signalent pas immédiatement au bourgmestre de leur commune les maladies suspectes qui se développent chez leur betail, en le tenant enfermé, et si les seconds n'agissent pas de suite, conformément aux prescriptions qu'on vient de rappeler, la contagion ne saurait être évitée, et, dans ce cas, Dieu sait quelles pertes l'agriculture aurait à essuyer!

The importation of horned cattle into Belgium by sea or land was prohibited by Royal Proclamation on the 30th August. This prohibition was afterwards extended to sheep as well as to hides, skins, fresh meat, and unmelted tallow.

By a circular of the Minister of the Interior, dated 17th September, governors of provinces are directed to stop fairs and markets and all assemblages of cattle in the neighbourhood of any centre of infection. Animals should not be admitted into a fair unless furnished with a certificate from the authorities of the place from whence they came, stating that the plague has not existed within the commune for three weeks at least.

By a Royal Proclamation issued on the 22d September, all fairs and markets for horned cattle are prohibited, except in the case of animals destined for slaughter (*destinées a la boucherie*), and accompanied by such a certificate as is mentioned above. The introduction to this Proclamation states that every animal found to be infected had been proved to have come from some fair or market.

On the 6th October, the Minister of the Interior issues a circular to the governors of provinces, complaining that the Proclamation of the 22d September had not been properly enforced. Store stock markets had been kept open, under the pretext that they were markets for butchers' stock; an "excessive facility" had been shown in admitting animals without proper certificates, and the local authorities had given such certificates without sufficient control. The Minister directs that the *gendarmerie* shall in future exercise a "severe control" in all these respects, and shall furnish reports to the governor, which the latter shall transmit to the Ministry of the Interior.

On the 10th October the Minister makes a report to the King, stating that the measures taken have been successful.

On the 1st November Lord Howard de Walden writes—

"My Lord, Brussels, 1st November 1865.

"The 'Moniteur' of yesterday, of which I enclose a copy, has published a note on the appearance and development of the Cattle Disease in this country, and the sacrifices which have been made with a view to arrest its progress.

"It appears that the first cases were made known to the administration on the 30th of August; that since that time it has broken out in 63 localities, in 42 parishes of six provinces. To prevent contagion, 354 beasts have been killed, 242 of these being actually affected, and 112 suspected in consequence of having been in contact with the others; only 13 appeared to have died. It is very difficult to verify to what extent the 'real Rinderpest' has prevailed, but I am very much disposed to believe that a great proportion of the cattle have been sacrificed prematurely; the alarm created by the first symptoms of any illness, and the proportionally advantageous allowance made for an animal killed at an early stage, are sufficient motives for precipitancy on the part of the proprietors. The early symptoms of several cattle affections are so similar, namely, running at the eyes and nose, quick breathing, fever, and staring coats, that in the hands of veterinary practitioners, having hitherto no experience in the 'Rinderpest,' the precautionary system of destruction must necessarily cause excess of loss.

"I have, &c.

(Signed) "H. De Walden and Seaford.

"The Earl Russell, K.G.,

"&c. &c."

NETHERLANDS.

Extract from an Official Report on the Cattle Disease in the Netherlands.

(*Transmitted by H. M. Consul at Rotterdam, 4th Sept.* 1865.)

The disease has appeared in the rural parishes of Kethel, Delfshaven, Moordrecht, Vlaardingen, Overschie, Kralingen, Nieuwerkerk on the Yssel, Spykenisse, Schiedam, Heerjansdam, Maasland, Sommelsdÿk, Zevenhuizen.

At Kethel, where the disease was first observed in oxen which had been brought back from England, it increased most. At Kethel the number attacked is not mentioned, but at the other places about 60 head of cattle were attacked.

At the commencement, before the disease was known to exist, the farmers sold their cattle which showed doubtful symptoms to the butchers, so that there were few diseased cattle to be found.

Five cases, however, of cattle which had been slaughtered, but which had not died of the disease, were examined.

After giving technical particulars regarding the symptoms before and after death, the Staats Courant proceeds to state that the cause and origin are not entirely clear, as the information on these points varies.

How the disease reached England, whether the said oxen had been in contact with diseased cattle there, and had in that way brought it over to this country, and whether they actually suffered from the same disease as that now raging in England, are points not yet satisfactorily determined.

The symptoms before and after death, in connexion with what is known of the probable origin, and the course which it has thus far followed, lead to the supposition that the disease must be what is called amongst veterinary surgeons contagious typhus (typhus contagiosus bovum). Further investigation must determine whether it is this disease.

The owners of suspected cattle cannot sell them without subjecting themselves to the penalties prescribed by Art. 459 and 460 of the Criminal Code, even in cases where they are in apparently good health, whilst the dead animals must be buried entire in order to prevent infection.

The report states, that slaughtering the animals will not always be sufficient to eradicate the disease. The newly purchased cattle might again take the disease. Besides this, it must be remembered that by slaughtering in every

instance every opportunity for scientific observation is taken away, and moreover no recovered animals would be preserved, and these have the greatest value, owing to their never being attacked a second time.

If even only 20 or 25 per cent. recover, they represent a greater value than the 100 did previous to the outbreak of the disease. This last observation is particularly applicable to those districts where cattle are bred.

In districts where cattle are only fattened it might be more advisable to kill in every instance; but this is not the case in the breeding and dairy districts.

In slaughtering it will be necessary to keep the interests of the stockholders in view, and especially consider whether the disease has only just commenced or has become more general.

In the first instance, when there are but few cases, or on the appearance of the first case, the cattle should be immediately killed, without allowing any other considerations to stand in the way, in order at once to eradicate the disease.

Should the disease have become more general, the following rules might be observed:

1. In fat cattle, kill all sick or suspected animals, keeping the skin, horns, &c. in some place, under proper police regulations, until all fear of infection be passed.

   The meat and fat of animals killed in the first stage of the disease can be quite safely eaten.
2. In milk and breeding stock, separate the cattle attacked, and kill on the rapid progress of the disease.
3. In purchasing new stock, take care to obtain proper certificates of origin.
4. Isolate every infected locality, parish, or district.

The medical treatment recommended consists of hydrochloric acid, mixed with treacle, and a thick decoction of linseed.

If the animal improves, decoctions of bark, sulphuric ether, and other stimulants can be employed.

It is, however, far better to take every precaution against infection, keeping farm servants at a distance, and especially preventing cattle-dealers, butchers, and strangers, and such people as are likely to have been in contact with sick animals, from approaching the farms and meadows.

It is also advisable to avoid touching strange animals, and not to purchase too soon after having had a case of disease, without taking every precaution in the way of cleaning and disinfecting the stalls.

It is further necessary to use every means for cleaning and purifying the stalls, supplying pure water, removing the fodder and straw as far as possible from the cattle, especially if disease has made its appearance, and removing the manure, &c.

A Bill was subsequently introduced, and passed into law to enlarge the powers possessed by the Executive of restricting the importation and transit of cattle; and a strict cordon was afterwards drawn around the whole of the infected district from sea to sea.

TRANSLATION of LAW to prevent the SPREAD of the CATTLE DISEASE, passed October 17, 1865.

(*Transmitted by H.M. Consul at The Hague.*)

ARTICLE 1.

Whenever, on the breaking out of any infectious cattle disease at home or abroad, it becomes necessary, for the preservation of the stock of cattle, and the health of inhabitants of the country, the importation and transit of cattle from abroad, the transport of cattle from place to place within the country, and the holding of cattle markets, may be prohibited; and prohibitory and other regulations may be established respecting the declaration, sale, treatment, and infection of living or dead cattle, meat, hides, hair, wool, dung, and other offal, as well as respecting the carriage of such articles from place to place, and this independently of the regulations framed by the provincial and commercial authorities, so far as they are not inconsistent with our Ordinances.

ARTICLE 2.

The transgression of what is established by us in consequence of the preceding Article shall be punished by a fine of from 25 to 500 florins, and imprisonment of from eight days to three months, together or separately, unless other laws inflict a severer punishment on transgressors.

Article 463. of the Penal Code and Article 20 of the 29th June 1854 (Staatsblad No. 102) are applicable in these cases.

Anything removed or sold at variance with our commands, and anything wherein or wherewith the transgression has taken place, shall immediately, or as quickly as possible, be seized and confiscated; and as far as it shall be required, in the interest of health or the prevention of contagion, the annihilation or rendering harmless of it is ordered. When the general interest renders this advisable, after acquittal or discharge of the prosecution, an indemnity shall be paid, which is to be determined by the judge.

ARTICLE 3.

This law comes into force on the day of its publication in the Staatsblad, and remains in force no longer than the 1st of January 1867.

The subjoined figures are extracted from the latest official Returns published in the *Nederlandsche Staats-Courant.*

	Attacked.	Died.	Slaughtered.	Recovered.
Total from Commencement - -	6,093	2,121	1,361	1,752
Week ending 28th Oct.	678	133	133	77

SAXONY.

(*Transmitted by Mr. Eden.*)

TRANSLATION (by Mr. EDEN) of DECREE, 30th September 1865, RESPECTING the RINDERPEST.

THE extent to which the rinderpest has spread in England, Holland, and Belgium, and the fact of its having broken out again in Lower Austria, give good cause for anxiety lest, notwithstanding all measures of restriction adopted by neighbouring States interested in arresting its progress, this destructive disease may nevertheless be introduced into the interior of Germany and into Saxony.

The Ministry of the Interior consider it, therefore, as their duty to anticipate the possible event, which will in all probability be at the time most unexpected, and to make such dispositions as to the steps to be taken in whatsoever place the disease may have broken out, as shall tend to crush it and to prevent its spreading farther.

In accordance, therefore, with the most high Decree of the 16th January 1860,* it is ordered on this subject as follows:

1.

Dr. Haubner, of Dresden, veterinary surgeon and medical adviser (medicinalrath), is appointed pest commissioner until farther notice, with authority to adopt the special precautions which may, in each particular case, be necessary to check and prevent the farther spread of the rinderpest, and to make the corresponding regulations. The orders of the commissioner must be accepted, and punctually carried out, until the Ministry of the Interior shall have otherwise ordained.

The chief district and police authorities must, upon the requisition of the pest commissioner, afford him every possible assistance.

The appointment of several pest commissioners, and the division of the land into different pest districts, is reserved in case of necessity.

2.

As soon as the rinderpest breaks out in an isolated farm, or in any place in the interior, or should cases of disease occur such as (in accordance with what is laid down in the appendix to this act) admit of the conclusion that they are cases of rinderpest, the police authorities are immediately to be informed of the fact, and the latter are without delay to require the presence of the veterinary surgeon of the district, and to proceed with him at once to an examination and diagnosis of the disease upon the spot.

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*The Royal Decree here alluded to empowered the Minister of the Interior, in the case of the rinderpest breaking out in countries bordering on Saxony, or connected with it by railway, to adopt at once all necessary measures for arresting and exterminating it.

3.

The duty of giving prompt notice of suspicious appearances in cattle, or of the outbreak of the pest, belongs, in the first place, to the respective owners, and to those who as stewards or in other menial position have the care and supervision of the cattle; but it is incumbent on all those that are in possession of reliable information.

4.

Until the arrival of the authorities and district veterinary surgeon, the domestic animals of all kinds upon the infected or suspected farm must be carefully guarded, and in the meanwhile neither animals nor infectious objects be allowed to quit the farm.

Any animals which may have died during this time must be kept in such a way that a medical dissection of them can afterwards be performed.

5.

If the examination of the veterinary surgeon results in certifying the existence of the rinderpest, or there be a well-grounded suspicion of the same, notice thereof must straightway be given, if possible by telegraph, to the chief district authorities and to the pest commissioner, and these latter are to proceed without delay to take all further necessary steps upon the spot.

In the meanwhile, however, the police authorities in concert with the veterinary surgeon of the district must shut off the affected or suspected farm, so that neither man, domestic animal, nor thing can either go in or out, and all communication with the farm be in the interval cut off.

Only those persons who are charged with certifying and exterminating the disease, or those who under special circumstances have of necessity to do with the inhabitants, such as doctors, midwives, &c., can be allowed admittance.

These latter must, moreover, on leaving the farm, undergo a thorough disinfecting process.

In the same manner with respect to the introduction into the farm in question of any may-be necessary means of life, those particular precautions must be taken which are best suited to the circumstances.

6.

When the veterinary surgeon of the district or the pest-commissioner declare that the nature of the particular disease can only be ascertained with certainty from the results of dissection, one of the diseased head of cattle still living may be killed in order that it may be dissected. The owner of the beast cannot hinder its being killed, but has a claim to full compensation for the dead animal, which is to be awarded him out of the public treasury. For this purpose the head of cattle is, before being killed, to be estimated according to its actual value before two impartial experts who are to be put upon their oath. If the result of the dissection shows that the beast which has been killed suffered from rinderpest, then the whole of the value fixed by estimation is to be awarded, in other case the value of those parts which may still be used must also be taken in account.

7.

In cases in which it has not for the moment been possible to make completely sure of the presence of rinderpest, the enjoined shutting off of a farm is to continue until, through farther observation and inquiries, every suspicion of the presence of this disease has been removed, and until the withdrawal of the prohibition has been ordered by the police authorities of the district in conjunction with the pest commissioner.

If, on the other hand, the disease is recognized as the rinderpest, the pest commissioner and the authorities have to pronounce as to whether the mere cutting off of the farm from all communication will be sufficient, or whether the whole or part of the locality must be shut off (ortsperre).

In this case, the enjoined cutting off from all communication is to last until the rinderpest is locally exterminated, the process of disinfection brought to an end, and the prohibition of communication with the rest of the country expressly removed, with the consent of the pest commissioner, (in the case of the whole place (ortsperre) by order of the chief authorities, and, in the case of a single farm, by order of local police authorities).

8.

Every head of cattle attacked by the rinderpest, and every head of cattle which, though at the time it appear sound, is suspected, is to be straightway killed, and to be buried in some fitting pit, precisely in the same way as that which dies by the disease.

So, likewise, as may be found expedient, are all things found in the infected place, which may be thought likely to retain the virus of the disease (such as stores of provender, manure, &c.) to be destroyed.

9.

The place (*eadaver-gruben* or *grubenplatz*) which the pest commissioners and the local authorities respectively think suited for a burying place for the cattle destroyed by the rinderpest or killed on account of the disease, and which they are to fix upon close at hand in the lands of the infected locality—and only if unavoidable in the neighbouring land—must be given up by the proprietor, for so long as it shall be forbidden to make use of it for any other purpose, for a full indemnity, to be paid out of the state treasury, though without waiting for the amount of the same to be fixed by estimation, which need only be done later.

10.

In places where the rinderpest has broken out, every inhabitant is strictly bound, when called upon by the authorities, to afford, either himself personally or through other proper persons, the necessary assistance in carrying out all measures which are required by circumstances or officially commanded, among others especially in killing cattle, burying that which has died or been killed, making the dead pit, filling up and fencing in of the same.

Assistance may, however, be sought for, in cases of necessity, in neighbouring places likewise.

11.

Appeals and other legal measures resorted to against the orders promulgated by the competent authorities for the purpose of exterminating or arresting the progress of the rinderpest have no power to suspend those orders.

12.

The owners of cattle which dies by the rinderpest, or which is killed in accordance with the police measures taken against the disease, as also the owners of infectious articles destroyed by order of the authorities (with the exception of the cases mentioned in paragraph 8, under heading *a*, *b*, and *c*, of the most high Decree of January 16th, 1860), shall receive full indemnity out of the state treasury.

13.

The fixing of the indemnity will be proceeded with in the manner prescribed in paragraphs 10, 11, and 12 of the same high Decree; only whensoever this mode of proceeding is not practicable, and it is found impossible to arrive at a voluntary agreement as to the proper indemnity to be paid, then it must be done by a local valuation on the spot, in each particular case, according to the actual value of the articles to be destroyed, after the actual and local prices at the time.

The local administrative authorities have to cause the valuation which is made with a view to indemnity to be proceeded with before two experts upon their oath, and have to acquaint the owner at once with the result. They have to draw up a legal act (protocol), of the valuation in the same way as in the case where a free agreement may be come to.

14.

In fixing the indemnity for the place used as a pit, which is also the duty of the local administrative authorities, the latter have to make an analogous application of the dispositions in paragraphs 7, 8, 9, 13 and 14 of the decree of the 3rd July 1835 (Gesetz und Verordnungsblatt ejusd. ac. seite 374 ff.) and, with the assistance of two sworn experts, to settle the amount of the indemnity reckoned for every year during which the spot of land was not allowed to be used.

To the state treasury belongs the choice either to pay the indemnity yearly, or all at once, for the whole time that the land was in disuse, with the just and right deductions, however, for the prepayment.

The fixing of the amount of the indemnity may, in cases of necessity, be postponed until after the removal of the prohibition to communicate with the place (aufhaltung der ortsperre.)

15.

Against the amount of the indemnity to be awarded according to paragraphs 6, 13, and 14, and to be fixed by valuation, there can be no appeal in the way of the administration on the part of the interested proprietors. On the other hand, a protest will not hinder proceeding to the killing of the cattle, the destruction of infectious articles and the taking possession of the place for a pit.

16.

The payment of indemnities awarded out of the state treasury should take place without delay after due notification of the same has come in. To this end, the administrative authorities of the district must, without loss of time, send in a report, accompanied by the acts of the valuation or of the voluntary agreements respectively, to the Ministry of the Interior, which latter will thereupon take all further steps with a view to the payment.

17.

The disinfecting processes to be followed after the disease is eradicated, and before the prohibition to communicate with the place is removed, are to be carried out under the direction of the pest commissioner or district veterinary surgeon, and must be superintended by the latter.

18.

The expense of the measures adopted on account of the rinderpest will be borne by the state exchequer.

The following are, however, exceptions :—

a. In the case mentioned in paragraph three of the high Decree of the 16th January 1860,* in which the expenses must be borne by the offender;

b. The cost of disinfecting infected buildings and utensils, which, in the case of each separate farm, must be met by the proprietor; and

c. Any compensation which may have to be made for the services mentioned in paragraph 10, as also for assistance and labour necessary for the support of persons who, in accordance with measures adopted for the purpose, are cut off from communication with the rest of the country, also for the keeping up of their property, likewise, finally for keeping the watches which have to be set in the diseased locality.

The amount of this expenditure must be raised by the communes of the infected locality, and in case of a piece of land being concerned which is not included in the circle of the commune, with a proportional contribution on its part.

In the case of such non-included isolated bits of land which do not come within the boundaries of a place (ortschaft), the expense must be borne by the proprietor of the land; while the duties, on the other hand, mentioned in paragraph 10, fall, in this case, on the inhabitants of the nearest place (ortschaft—commune or parish).

19.

Should the disease attack the sheep and goats, the preceding regulations must be analogously applied.

The killing, however (ordered in paragraph 8), of these animals who may still be sound, but which are suspected through their standing in contact (with diseased beasts) is left for the consideration and regulation of the pest commissioner at the particular time.

20.

All measures which may, according to circumstances, be otherwise necessary for the extermination of the disease and the prevention of its farther spreading, as, for instance, prohibiting of cattle markets in the diseased locality and the neighbourhood, barring of public ways, &c., must be left, in each particular case, to the conscientious discretion of the pest commissioner and the chief district authority, and must be specially ordered by the latter with the agreement of the pest commissioner.

21.

All contraventions will be punished according to paragraph 3 of the most high Decree of January 16th, 1860.†

This decree is to be diligently observed until further notice.

Dresden, 30th September 1855.

Ministry of the Interior.

(Signed) Baron de Beust.
Smiedel.

Translation of Supplement or Appendix to the above Decree.

The rinderpest (also called Löserdurre, Viehseuche) is a foreign disease which among us never arises spontaneously from indigenous causes. It originates in the Russian steppes, whence it is introduced into other countries by *contagion*. Different from indigenous diseases, it is not in the least dependent on external influences, such as the season, weather, food, &c., by which it can neither be advanced nor averted.

The original introduction of the disease from the Russian steppes into the countries of Europe lying to their West is always a result of importation of the so-called Podolian or steppe cattle. The farther spreading from land to land may however take place in many ways.

Here also the introduction of the disease is, as a rule, brought about by the importation of cattle from the infected locality. It may, however, likewise be introduced in other ways, especially when the disease has already entered neighbouring countries, as, for instance, through everything which has had to do with sick cattle, as meat, fresh hides, horns, &c.; and again also through the so-called infectious articles, such as furs, wool, wearing apparel, &c.; and finally through domestic animals, as sheep, goats, and swine, whenever the latter have been in contact with diseased beasts or breathed the same atmosphere. The means of contagion are consequently many and manifold.

The rinderpest is for our native cattle the most dangerous disease which exists. A loss of 90–100 per cent. must always be reckoned upon; only in especially favourable circumstances does this turn out to be something less. Among the steppe cattle and the allied races, on the other hand, the disease is much milder, the loss being here only to be estimated at from 50 to 60 per cent., while it may indeed be less, but rarely exceeds this figure. Moreover, the rinderpest is not alone confined to horned cattle (cows, oxen, &c.); it may also spread by contagion to sheep and goats, and here also be very destructive. The loss is however less here than among indigenous *cattle* (rind-vieh, cows, oxen, &c.), and may be estimated by the results of former experience up to the present time at from 50 to 60 per cent.

Means of cure there are none. Everything that has been tried has been found useless, and every attempt at curing is for this very reason dangerous, namely, in that the disease is meanwhile retained, and the development of contagious matter stimulated. There are but two effectual ways of arresting the devastating progress of the disease, namely :

1st. Every head of cattle attacked by the disease or through being in contact with sick cattle suspected of it must, although healthy at the time, be straightway killed; and

2d. The infected farm shut off from all communication (gesperrt werden) until it has been disinfected.

By such means the disease is nipped in the bud, and its farther spreading thus averted.

The sooner these measures are set to work the surer is the result, and, on the whole, the less is the loss, although the latter may at the moment appear very great.

It all, therefore, resolves itself into this, to recognize the disease immediately on its breaking out; and it is therefore requisite that all cases of attack by the disease, and all suspicious cases of sickness, should at once be brought to the knowledge of the authorities. With a view to render this possible an enumeration of the most important symptoms of the disease, and the most important phenomena revealed by dissection, is here added.

Symptoms of the disease.—The animals fall off from their feed, and finally refuse to eat at all. Rumination takes place irregularly, continues only for a short time, and soon leaves off altogether. But little milk is secreted, which in the case of milch cows is usually the first striking symptom of the disease. The excrement is sluggishly evacuated, and of a dryer quality; the urine less in quantity. The hind quarters are somewhat blown up (angedostel), while at the same time slight pains in the stomach are felt (the beast looks round at its own body). Meanwhile the animals are dull and dejected (only at times is there a temporary animation), hang down their head and ears, evince weakness of the back (loins) in their movements, and generally stand with the back somewhat bent and the feet under the body (i.e. they stand over). With all this is associated evident aguish fits, manifested by changes of temperature, also hair standing on end, &c., and an increased sensitiveness along the vertebral column when the latter is pressed.

None of these appearances, however, are in themselves in the least characteristic. They especially announce nothing more than feverish suffering in the hind quarters, and are present also in cases of so-called indigestion or stoppage of the bowels.

Very soon, already on the second or third day, other symptoms, namely, those of catarrh, appear, and these confirm more than ever the suspicion of rinderpest. To these latter belong redness and tear drops in the eyes; first a watery and then a slimy running at the nose; increased warmth and slobbering in the mouth, in which, moreover, red spots are often to be found in the gums, palate, and lips, which afterwards develop into sores

* § 3. punishes the offender against the special regulations on this subject, and makes him responsible for all damages resulting from his infringement of the same.

† This paragraph in question visits all infringements against the pest regulations with imprisonment up to 18 months, and liability to the amount of the damage consequent upon the special infraction of the law.

(erosions). To this may now be added a more or less hurried, heavy, breathing, accompanied at length by moaning and heavy groaning, and a frequent hollow feeble cough. Still later comes a frequent bad dysenteric discharge from the bowels, in which the evacuations are of a putrid nature (gauchige) and of a brown colour; they are likewise mixed with blood, and of an exceedingly foul odour; they come at last involuntarily and by fits and starts, and accompanied by straining of the bladder and open inflamed gut (offenstehen des afters).

The weakness and increasing feebleness becomes greater and greater. The beasts can hardly keep any longer on their legs, totter in walking, lie down a great deal,—at last almost uninterruptedly, and can no longer get up from their litter. Rapid emaciation sets in, the limbs become cold, the eyes sink back into their hollows, the breath becomes stinking, and so, with symptoms of complete exhaustion, death supervenes, generally between the fifth and seventh day, though also sometimes earlier or later.

Not even these appearances are, however, in themselves characteristic; the heat and the slobbering of the mouth, as also the red spots and sores, recall to mind the mouth disease (Maul-seuche), the redness and water in the eyes and the running at the nose recall to mind the so-called disease of the head (Kopfkrankheit), the rapid breathing and the cough are likewise to be found in cases of disease of the lungs (Lungenseuche), while the dysenteric evacuations may pass for dysentery itself; but in this *succession one upon another*, and in this *connection with one another*, they are only met with in the rinderpest.

In order, therefore, to recognize the rinderpest with certainty, it becomes necessary to be able to watch the whole course of the disease, and, furthermore, to corroborate the results arrived at from observation of the living animal by the phenomena brought to light by dissection.

Results of dissection.—The most important and constant appearances are to be found in the stomach and bowels, and they alone are to be mentioned here. The two first stomachs show no essential symptoms. The third stomach* (Psalter, Buch, Löser, Blättermagen) is, on the other hand, almost invariably choked with fodder, which is introduced in layers of dry, friable, apparently scorched slices between the single leaves (whence the name Löser-durre†). The leaves themselves are friable (mürbe), and traversed by blood-vessels; the warts (wärzchen) are saturated with blood, and the inner skin or epithelium is often loosened and separated, and remains sticking to the layers of food. Only exceptionally, for instance when soft green food has been introduced, does the stomach contain soft, pasty masses of fodder.

The runnet (fourth stomach) and the intestines already appear externally more or less bluish red and inflamed. This is, however, especially the case with the inner mucous membrane.

The kind of inflammation which is here present is of a peculiar sort, and in particular is characterized by ersudate‡ and apparently ulcerous conditions, the full and proper appreciation of which is only possible to professional persons. The greater intestines likewise partake of these inflammatory symptoms, although to a less striking extent. The liver is usually blood-red and soft (mürbe), and the gall-bladder over filled with gall (whence the name Uebergalle).

The results of dissection, again, resemble those obtained in the case of other diseases, as, for instance, in the so-called buch-brand (inflammation of the leaves of the psalterium) and in dysentery; and here, again, profound technical knowledge is necessary in order to be able to arrive at a solid and sure diagnosis.

To confirm the results of the latter, both the progress of the disease and authentic proof of contagion will be found of service in any case. Of the latter enough has been said at the commencement; with regard to the former, attention may be called to the following:—

As a rule the disease attacks at first only a single head of cattle; then later, generally on the fifth or seventh day, a second or a third head is attacked, after which more frequent cases (in the case of large stocks of cattle almost daily cases) occur, until at length all the cattle is attacked.

On the whole, then, in spite of the difficulty of a sure and indubitable assurance of the disease, there are, nevertheless, many signs which enable even one not technically acquainted with the subject to recognize those cases of sickness which are either cases of rinderpest, or at least give rise to well-grounded suspicions that they are cases of rinderpest.

* Book tripe, psalterium.

† The stomach in question is called the *Löser-magen*, as it finally dissolves the food prepared by the other two stomachs. In this disease, however, it becomes dry and inflamed, retaining the undigested food in powdery layers, between the leaves of which it is composed.

‡ Ersudate is a matter produced by perspiration.

AUSTRIA.

EXTRACT from the GENERAL REGULATIONS in force in the AUSTRIAN EMPIRE relating to DISEASES of CATTLE.*

(TRANSLATION.)

1. THE CATTLE PLAGUE.

Introduction and spread.

§ 42.

The cattle plague, one of the most devastating pests, which annihilates the prosperity of whole communities and districts for many years to come, but which attacks the cattle only once in their lifetime, never originates (as experience has shown) in the provinces of the empire, but is always imported in the course of cattle traffic from Russia, Moldavia, and Wallachia, or it is imported in consequence of the intermixture of the home cattle of the frontier localities with those of foreign East; but when once imported in the country, it spreads by the operation of the air which developes itself during the epidemic state in all parts of the infected animal, in the exhaled breath and in the skin evaporation of the same, throughout the whole of the native cattle, and becomes by the approach of the sick with the sound, or by the intercourse of the people to whose clothes the infectious matter adheres, as also by the importation of the productions of the sick animals, etc., etc. a wide spread contagion, if no limits are set to it by strict efficacious measures.

These measures can only be directed:

1. To prevent the plague from being introduced from the land of its home;
2. To destroy the imported plague as quickly as possible, by destroying all the vehicles and organs of the contagion.

A) *Preventive measures against the importation of the danger.*

1. Cattle quarantine.

§ 42.

As the danger is continually threatening, of importing that plague from the foreign countries of the East, there must continually exist measures to guard against it, even in times when nothing of its existence in Russia, Moldavia, and Wallachia is heard of; these measures consist in quarantine institutions.

All the cattle imported from the above countries, which ought always to be suspected as being the home of that plague, ought only to be permitted to come into the lands of the empire by certain frontier spots, where they must be kept for a certain period in quarantine asylums. The duration of the quarantine is to depend on the circumstance whether the plague prevails in the neighbouring foreign places to a greater or smaller extent at the distance of the frontier. The quarantine may thus be limited to a few or 21 days duration.

Should it appear that instances of the plague have occurred close to the frontier, or that the plague prevails abroad to an alarming extent, and that consequently it may be reasonably expected that the herds, though originally healthy, will have to pass pestilential districts, when they will be found suspected of infection, it may then be justifiable to prohibit altogether the importation of cattle from Russia, Moldavia, and Wallachia for the time being, i.e. so long as the plague prevails.

The cattle arrived in quarantine establishments, though they may seemingly appear healthy, are to be lodged in fenced spaces, separately, fed by particular separate guards, and be carefully examined by doctors during the whole period. Those herds which by first examination show indications of the disease must at once be dispatched back over the frontier. Should, during the quarantine period, show no instance of the disease amongst the herd, they may pass into the interior provided with a passport of sanity. Should, however, during the time, occur a case of disease, its nature is to be thoroughly examined and watched, and if it should be judged to be a case of the prevailing plague, the whole herd is then to pass a renewal of the quarantine of 21 days, always counting from the last day of either recovery or death, and the herd is only then to pass free into the interior if no new case of the disease shows itself during the whole period amongst any of them.

It is understood that the fenced spaces (okels) of the quarantine establishments where the diseased cattle are lodged, must be cleansed and purified according to pre-

* Extracted from a copy of the Regulations (which are of considerable bulk) transmitted by Lord Bloomfield. Translation furnished by the Foreign Office.

scribed regulations, before other herds are admitted into it to undergo the same process.

If steppe herds are met with in the interior which are not provided with the regular marks of quarantine or passport of sanity, they are at once to be stopped while their owners or herdsmen have to appear and show that the herds in question are either of inlandish extraction or been in the country for at least three months past, which proofs are to be delivered to the provincial authorities of the sanitary regulations of the place.

These passports must contain *a*) the number of the herd, *b*) the names of the owners or drivers, *c*) the name of the place whence the herd comes, *d*) the particular race and other indication, *e*) the place whither they are destined and the way by which they are to arrive thither, *f*) the day of their departure, *g*) the certified evidence of their perfect sanity or soundness testified by the officers appointed for their examination or inspection. If such evidence cannot be produced, the cattle thus stopped must be confined into particular pasturages and spots without the borders of the locality, and must not come into contact with the native cattle for 21 days quarantine.

Should in the meanwhile single instances of suspicious symptoms manifest themselves, the diseased animal is to be killed and interred according to regulations, while the merely suspected one is to be watched, thoroughly examined, and pass through a quarantine of 21 days, counting from the last day of either the death or recovery of the animal, after which, if it be found sound, it is to be let free. The same process must also be observed with cattle which are marked with the regular quarantine sign, or provided with a sanity pass, if during their march, isolated cases of the plague occur amongst them.

Only when it is easily possible to carry such diseased cattle from the spot where they have been stopped, to the railways, it is permitted to transport all such killed animals, after the diseased pieces were duly interred by rail to the larger towns, where considerable meat consumption exists. The same may also be done, if the place where the cattle were stopped, is near a large town, so situated that the cattle could not reach it on the usual roads.

2. Precautionary measures, with regard to traffic with animal productions, and intercourse generally.

§ 43.

As not only the diseased animals themselves are the bearers of the malady, but also their horns, skins, hoofs fat and flesh, &c., bear within themselves the infectious stuff of the disease, particular attention is therefore to be directed to these animal productions at their importation from the above countries, and namely:

a) Skins may only be imported when perfectly dry and hard. Fresh skins are only allowed to pass the frontier after having undergone the process of disinfection by the vapours of sulphuric acid, according to § 29.

b) Horns and hoofs must be immersed for 12 hours in salt-water (10 lbs. of rock salt to one pail of water), must be frequently stirred and dried, while the tips of horns must be well washed with salt water and well dried only.

c) Melted fat or grease can only be admitted in casks; the melted tallow in abundant wrappings, can only be admitted after these coverings have been destroyed or cleansed on the frontier.

d) Unmelted tallow and raw meat are to be refused entrance.

If the malady prevails extensively in the neighbouring foreign states, the authorities may for the time being prohibit the importation of cattle generally, and in fact of all productions coming from the infected places.

Should the plague break out in districts close to the frontier, all sorts of sheep, goats, and swine are not to be admitted, and particular attention is to be paid to dogs and fowls which frequently carry about the disease, and it is desirable to check as much as possible their wandering about, especially the former. Persons coming from infected places as also cattle dealers, butchers, tanners etc. are to be refused entrance, or must undergo the usual quarantine process, while all intercourse is strictly prohibited with the infected place itself.

3. Watching over the Herds.

§ 44.

It frequently happens that cattle, though they did not during the observations made while in quarantine show any symptom of the plague, have at a later date fallen a victim to the disease, while on the other hand many herds which have been smuggled over the frontier, cannot undergo close inspection, and thus give great occasion for infecting the native herds with the malady, great attention and watching are therefore necessary over such cattle during their walk to their destination. Such cattle must be strictly held to walk through the streets appointed by the local authorities, as removed from habitations, and provided with separate rations of fodder, and resting stations. It is therefore inadmissible that such herds of oxen should be fed or pass the night in the close vicinity of inhabited localities or in commons.

Careful attention must be paid to the circumstance, that the inhabitants of those localities in the vicinity of which herds of cattle are passing, should strictly observe the prescribed rules sketched out in §. 6, and repeat occasionally the proper instructions concerning the proceedings with the diseased cattle, and more especially as regards the contents of §. 18.

During their progress, such foreign cattle must be frequently inspected and examined on certain spots and points appointed by the local inspectors, but more particularly at the point of transition over the frontier from one Crown land into another, and see that none of them shows symptoms of the disease, and that their number is complete. If the cattle be found sound and the sanitary passport in perfect order, the inspector of the commission is then to join his own certificate with that of the origin and sanitary condition of the cattle. But if on the other hand a deficiency is observed in the number marked in the passport, the herd is to be stopped and the driver required to explain the cause of the diminution, which explanation is to undergo a searching investigation. Should it be found that one of the number has remained behind or even died, on account of or from disease, the nature of the disease or its cause is at once carefully to be investigated, and the result must show whether the whole herd is at once to undergo quarantine, or allowed to pass on, but the inspector is in either case bound to report to the district authorities.

But even in case the whole herd is allowed to pass on, the report must not omit to mention the deficient number, its cause, and the remaining number of the cattle. The sale of such cattle can only be permitted to take place in localities where the authorities together with a doctor or veterinary surgeon, can order a regular thorough inspection of the cattle before they are sold, and see whether they are in perfect health, and if so, to be deducted and written off in the passport, while the purchaser is to receive a new certificate clearly stating the name of the driver of the herd, and the date when the sale was made, not omitting to fill up the blanks concerning the original certificate with regard to the sanitary condition of the herd. These certificates are to be produced by the purchaser to the local authorities of his home when a new inspection of the bought cattle is to take place.

If one of the number must from illness remain back, the local authorities are strictly forbidden to allow such a cattle to be harboured in the premises amongst the other cattle, while they are bound to use even force, and against the will of the driver, to confine it in a separate stable until the termination of the disease, where it is to be fed and attended to by separate servants chosen for the purpose, and where no other cattle is to be admitted. Should the owners or drivers not consent to the process, the diseased beast is to be killed on the spot, and buried deep underground, that no injury may arise from the flesh and other parts of it, while the skin, after its purification according to § 29, is to be given up to the owner, or bought of them at a certain price.

It often happens that during long journeys, secret sales of the herd are made, among which are heads suspected of the disease, and are secretly slaughtered under some pretext or other, and thus promulgate the plague by infection. To meet this evil, the authorities must see that all foreign cattle destined for home consumption should, if possible, even in times free of the plague, be directly transported by rail to their destination.

Watching over the Cattle Markets.

§ 45.

In localities where cattle fairs are held, all foreign beasts are to be harboured at spots removed from the usual market place, and which spots must be properly cleansed before the native beasts are admitted into it. On each of such market days, the native cattle must not be driven to the pasture fields, but each possessor of such cattle must keep them confined in the stable; nor can admittance therein be given to the foreign cattle, nor pens be built for them on the commons, or allow them to drink of the vessels from which the foreign beasts have drunk, or give to the native cattle the remnants of the fodder left by the former.

Particular regulations respecting the cattle markets are found in §§ 3, 4–7, which must be strictly observed.

B) *Measures for guarding Cattle from the Plague as soon as it has broken out in the Country.*

1. Measures for the safety of cattle in the different Crown lands or districts.

§ 46.

If, in spite of the foregoing preventive measures, the plague has actually found its way in a province, the provincial authorities are at once to announce the fact (in urgent cases by telegraph messages) to the authorities of the neighbouring Crown provinces, that they may at once take the requisite steps for the safety of their respective districts. The nature of those steps will depend on the extent of the spread of the plague, on the extent of the intercourse existing between the Crown lands among themselves, and on the degree of the distance of the frontier where the plague prevails.

When the danger is in the proximity of the province, or on the frontier, it will be necessary to draw a bar or cordon, and debar all intercourse with persons dealing in cattle or their productions, &c., &c.

The following steps are urgent and necessary in that respect:

1. Watching over the frontier by posting guards on the prominent roads leading from the infected districts; these guards must uninterruptedly keep and watch on their appointed spots, and see that no cattle product or even persons step over the cordon from the infected provinces. Consequently no waggons driven by oxen or cows, no cattle, not even calves and cows, are to be allowed to pass the bar, from the infected province, but are to be driven back across the frontier.
2. If the importation of cattle from one province into another necessary for consumption especially of the larger towns, cannot be possibly prevented, the transport, where it is feasible must be effected by rail, during which transit no cattle sales ought to take place. But if it cannot be effected by rail,
3. The authorities are to fix certain stations, by which alone cattle may pass, and where inspectors are to be stationed (consisting of the members of the sanitary commissions and police staff) whose task it should be to examine the cattle and compare them with the certificates brought with them. In case of doubt or suspicion whatever, the drover is regardlessly to be shown back, and due report of the fact given to the superior authorities. But should the examination of the drove prove satisfactory, allowed to pass the bar, they must strictly keep on the roads prescribed for their passage, and where on certain points the examination is to be repeated by appointed inspectors, and treat the drove according to the regulations of § 44.

It is self-evident, that such cattle coming from infected provinces, are to undergo a more rigorous examination (§ 44.) than they would in times free of the plague.

4. At the time when these cattle pass through the different places which lie on the roads fixed for them, the home cattle must be kept in their respective stables, nor are their attendants allowed to come near those droves during that time, when it is also forbidden to drive cattle on the open roads, generally.
5. Raw meat, entrails of cattle, fresh bones, unmelted grease, skins, horns, hoofs, are strictly prohibited to be imported, while melted grease, dry bones and skins (if provided with certificates showing that they came from sound parts) are permitted to be imported, as are also horns and hoofs, when proved that they have undergone the prescribed purification; but the importation can only take place through the fixed stations, while on other stations such productions are treated as raw materials generally.
6. Wandering masterless dogs are to be shot as soon as they appear on the frontier, while the packages of pedlars are to undergo a strict examination whether they contain skins or other animal products; if such be found, and they happen to come from the infected provinces, they must at once be shown back. Cattle dealers and butchers coming from beyond the frontier, if they cannot prove that they come from sound parts, are likewise not to be admitted, and particular notice on that point is to be given to the communities bordering on the infected places, in the Crown lands.
7. So long as the plague does not prevail on the frontier, when it is not particularly forbidden, the frontier places where the plague has not yet entered, are permitted to have their cattle driven out to the usual pastures, and used within the precinets of the commons for domestic purposes, though not across the frontier. If an inhabitant arrives with a vehicle drawn by cattle from a diseased inland place, he and his vehicle are either to be shown back, or enjoined to keep the same cattle in quarantine, without the town for 10 days, and at the expiration of which to cleanse the cattle and the vehicle before they can be admitted entrance into the place.
8. Frequent excursions are besides to be taken along the frontier, especially in the proximity of the infected frontier-places, to make sure that no by-ways or paths have been attempted to circumvent the bars. Should points to be discovered, which may favour such circumvention, they are to be doubly guarded.

2. Measures for Districts and Localities closely threatened by the Plague.

§ 47.

If, despite these precautionary measures, the plague has made its appearance in one or several places of the Crown lands, the following instructions are to be introduced and carefully watched over, for the safety of the neighbouring places.

1. If the plague has really broken out in a neighbouring place situated within the circle of one hour (one German mile), or even in the next vicinity, the local authorities are at once to announce the fact to the inhabitants, acquaint them with the utter incurability and mortality of the malady, with the consequences of infection, its easy spread, and the great danger threatening the destruction of their whole live stock, and to summons them to the strict observanee of the —though troublesome—means of guarding against it. The inhabitants are in particular to be warned against the violation of the regulations, pointing especially to the penalties contained §§ 400–402 of the penal code, which are to be republished.
2. Within the circle of three German miles of the place of the plague, independent of the other penalties, no cattle market is to be held, and all intercourse with the neighbouring infected place prohibited, except on the most urgent necessity under unavoidable circumstances, so long and not until the district authorities announce the total cessation of the plague in the place. No cattle is to pass through the infected place, though the usual roadway lead through it, but it must pass by a road in a different direction purposely appointed for it by the police authorities.

   Intercourse with the infected place, if rendered unavoidable by circumstances, the authorities must strictly see that only horses, and no horned cattle be employed in vehicles of conveyance, nor dogs allowed to accompany them. The cattle stables must not be entered, and in the place where the plague prevails, the remaining in the stables must not last longer than is necessary for the completion of the work.

   At the return home, the shoes and clothes used during the journey must be changed, hands and feet washed, and all approach to the children at home avoided, while the herdsman and farm labourers must be strictly forbidden to enter the locality visited by the plague.
3. It is strictly forbidden, under the penalties of §§. 401 and 402, to the inhabitants of healthy places, to import or purchase secretly or publicly, diseased cattle, meat, milk, butter skins, grease (fat), or any other animal product, whether of sound or sick cattle coming from places suspected of the plague, and to dispose of them to others or to use them for their domestic use, nor is it permitted to any man coming from a place of such disease, to abide long in the healthy locality, and still less to visit the home cattle of the place. A watchful eye must, therefore, be particularly kept on foreign butchers, cattle dealers, and tanners, as also on wandering medicine sellers, public players, and their servants. As soon as they enter the place, they must produce efficient evidence that they came from perfectly unsuspected places, and don't carry with or about them anything subject to infection, but in case they cannot do so, they are to be sent back, either to their homes, or across the frontier.
4. In the communities next to the infected places, the cattle ought possibly be kept in their stables where they are most safe of infection; but should deficiency of fodder necessitate their grazing in the fields, it may be done under the condition that the cattle should not only not enter the ground and soil of the infected locality, but graze at a considerable distance from such a locality, and where it is possible even graze in a contrary direction, or still better, in the fields nearest to their homes. Within the circle of a half a German mile from the infected place, no work is to be done with waggons drawn by draught oxen, and of course, not within the precincts of the infected place itself.

The local authorities are bound, must impress upon all owners of cattle the necessity of laying in a stock of fodder for at least six weeks, that in case the plague should break out in the place, the general seclusion of the stables which will be necessary for the diminution of the malady should not prevent the cattle from being properly fed.

5. All cattle which died in the vicinity during the prevalence of the disease, must be dissected and fully examined by competent judges, and if symptons of the plague show themselves, the place is to be declared as infected, and all the regulations concerning the measures against the disease must be fully carried out.
6. As soon as the plague has broken out in the vicinity of a place, all the afore-named means and measures are to be carried out with redoubled vigour and conscientiousness, and every case of the disease is to be immediately and minutely stated medically.

A few wise and reliable persons are moreover to be chosen from amongst the community, as guards on the frontier and in the place, who are to show back all home and foreign cattle coming from infected places, as also all vehicles driven by oxen, to watch all wandering individuals, together with their luggages, and to stop everything seemingly suspicious.

As *suspicious*, may be considered all persons coming from infected places and leading therefrom cattle, or carrying with them meat, hides, and other animal produce. If refusing to return and step over the frontier by force, one of the guards is to accompany them to the place and give them over to the authorities, who will order the imported cattle to be brought to a separate spot of confinement where they are to be fed at the expense of the owner, while the persons themselves together with the animal products found upon them, are to be conveyed to the next district office where they will be dealt with according to law.

If the confined cattle die within 10 days of the plague, or if it results from investigation, that the imported animal products are parts of secretly slaughtered diseased cattle, the arrested persons are to be punished according to §§ 400–402 of the Penal Code, otherwise they are to be punished as merely disturbing public order, and released after paying all expenses and loss of their cattle.

3. Measures against the plague, in the place itself, where it has broken out.

(a) Report and preliminary measures.

§ 48.

As soon as the cattle plague has made its appearance in a place, the local authorities are at once to report the fact to the district office, that arrangements may at once be made for the necessary steps to be adopted. But in the infected place itself, the fact is to be announced to the public without waiting for the arrival of the Plague Commission, and to summon all owners of cattle to lock their stables, to give admittance to nobody, and to entrust the nursing of the cattle to only one person, who is bound to keep aloof from all intercourse with the other inhabitants, and more especially with those in whose dwellings the plague has broken out. Any magistrate who neglects to report the fact to the district office or administration is immediately to be dismissed, declared as incapable to fill the office, and is besides to be punished according to §§ 400–402, of the Penal Code.

(b) Medical examination of the plague.

§ 49.

The investigations on the spot are to be introduced by the district judge assisted by the appointed physician or veterinary surgeon of the Plague Commission with all possible haste.

After the arrival of the Commission members, the nature of the prevailing plague is to be ascertained, guided by the questions contained in § 17, and the circumstance whether the disease prevails in the vicinity, and whether droves of foreign cattle have recently passed the place or the vicinity, or whether some fresh cattle have been recently purchased in the place.

(c) Census of live stock.

§ 50.

If previous experience shows the probability, that the malady is not the cattle plague, the members of the Commission can have no hesitation to visit the epidemic stables, and see how matters stand. But if already at the first visit the result shows that the malady is in reality the cattle plague, then an inventory of the number of the existing cattle is to be prepared, the first and important duty of the Commission being, to get a true knowledge of the character of the plague then prevailing in the place, as the only safe means of quickly suppressing the disease consists in the application of the club, whenever it is fully proved that by killing the diseased the others may be saved, and the malady disappear.

The census of live stock is to take place from house to house, regardless of the calculation stated by the committee of the community; but to prevent by this operation itself the further spread of the disease, the Commission must observe the following rules:

1. They have in the first place to visit the stables supposed to be as yet free of the plague, and order all smaller domestic animals to be removed from the courtyards, and confined in a separate place. The doctor or veterinary surgeon is to accompany the member of the Commission in his visit to the stables or to the courtyard where the cattle have been driven in, but without touching them; it is advisable to put before the cattle such fodder as they best like, in order to enable the visitors to judge of their appetite, by the manner in which they seize at the fodder; they have also to inspect the nature of the excrement; if any thing suspicious is apparent, the number of the beasts is to be ascertained and registered.
2. If some of the beasts are suspected of the malady, the house is to be registered, when the closer examination of its cattle will take place after finishing the visits in the stables of the sound animals. As soon as the stable revision is finished throughout the whole place, the suspected beasts are to undergo a medical examination, beginning with the least suspected and finishing with the more suspected. After this the Commission is to repair to the houses already registered as attacked with the plague, and investigate the nature of the disease. If experience (not certainly or probability) suggests the suspicion that the disease is in fact the cattle plague, the examination is to begin—in order to ascertain scientifically the nature of the disease—with the thorough diseased beasts, and above all with a section of the existing cadavers, or a heavily diseased beast that is to be slain for that purpose, which latter process is, by the bye, the best means of ascertaining the nature of the malady.
4. If the result shows that the malady is indeed the cattle plague, the fact is to be published throughout the place, and warning tables to be placarded in all the avenues and streets of the locality. The small domestic animals are then to be removed from the open streets, and the inhabitants are enjoined to the performance, under threat of punishment, while the transit of cattle through the place or the driving with such cattle are to strictly prohibited. Also all the official arrangements necessary for the safety of the neighbouring places are to be immediately introduced, while the census of the live stock, to ascertain the extent and spread of the plague, is not to be undertaken by the Commission on that same day, as it may occasion infection and spread by their presence in the stables and courtyards, but they are to return home, and if the distance is too far, they will have to pass the night in an asylum prepared for the purpose, and proceed the following morning to further operations, after careful cleansing of their clothes.

(d) Extermination of the plague.

α. Where it has not widely spread itself in a locality Slaughtering.

The efficient means of quickly annihilating the plague in a locality are various, according to the greater or lesser spread of the malady at the time of its first appearance. If the result and the recent census of live stock shows that only a few have sickened with the malady in the place whence no further spread abroad is to be apprehended, and that consequently the plague may be expected to cease there by removing quickly the diseased and suspected beasts from the place, and proper cleansing of the stables, then it will be expedient to kill all such beasts, or, as the saying is, *to use the club*.

As suspected beasts, may be regarded all those beasts which have mixed or come in direct or indirect contact with the really diseased ones, even if they show themselves no symptoms of the disease. The application of the *club* is to be applied at every new outbreak of the malady, as the best remedy against the disease. For that purpose it

is necessary that the inhabitants should be compelled, under heavy penalties and severe punishments, to announce without delay the incipient sickening of every beast, and not to wait until the malady has attained a higher degree of danger or until it has attacked a greater number.

The definitive decision whether or not the *club* is to be applied in each case depends on the opinion of the political Commisioner, who with the assistance of one or more veterinary surgeons experienced in such cases, has to decide on its expediency and to report to his superiors.

The *State* is ready to pay for the beasts killed by its orders, under the following conditions:—

a. In doubtful but suspicious cases occurring in suspicious times, when the use of the *club* has been advised by the authentic surgeons and authorities, the owner is entitled to repayment of the value of the beast, as estimated by the surgeon and authorities, after deducting the value of the diseased parts.

b. Compensation for beasts killed after the outbreak of the malady is only then granted when it is satisfactorily proved that no blame is attached to the owner for the sickening of the animal, who has duly followed out the proper regulations concerning the malady, nor even in any way concealed it from the authorities.

To ascertain the value of the killed beasts, the authorities are to be guided by the market price of the locality, by the age, race, and usual employment of the beast, and to keep in sight the interest of the State in awarding the compensation.

As nearly all beasts attacked with the malady it ever recover, and are thus lost to the owners, even when not killed, regard must be had to the circumstances at the valuation of the price to be compensated, by which the authorities are to be guided by the following rules:—

1. Cattle attacked by the plague at so advanced state that they could not be expected to survive it, the compensation is to be one-third.
2. For cattle killed at the beginning of the illness, and the severity or degree of the malady remains, doubtful, the compensation is to be two-thirds.

The hides and horns of the killed animals may, after their due cleansing, and the fat, after its being melted over fire, be eventually sold, and their value is therefore to be deducted from the total sum of their estimated value.

If beasts doomed to be destroyed were in such a state as to leave a doubt whether they were entirely sound, or attacked by the first symptoms of the plague, they are to be professionally slaughtered, and inspected by the Commission. If their entrails show no traces of the malady, the flesh may be given up to the owner for home consumption, and the value is to be deducted from the total estimate. But if several beasts are to be slaughtered in one and the same house, and it is evident that they exceed the necessary consumption of the household, the flesh may be sold to the local butchers, or if such is not feasible in the place, it may be smoked or pickled, or sent for disposal in a neighbouring large town. The transport, however, of such meat to towns can, with the exception of the entrails, be effected either by carriage, or, according to circumstances, by rail, under surveillance of a reliable escort, who will be entrusted by the Commission with the necessary certificates, and a letter to the inspector of the market, who is to dispose of the meat at the best price for account of the Treasury.

Sound cattle who are to be killed merely for having come in contact with sick cattle, may be sold to butchers, who are, however, bound to slaughter them in the *plague house*, and have them inspected by reliable individuals. But if no butcher is found in the place willing to purchase them, they may be dispatched, if a railway is in the vicinity, by rail direct, and under escort, to a larger town, (in Austria, *Vienna*,) where the consumption of meat is more considerable; but the quantity must be accompanied by a certificate from one of the Commissioners, wherein is indicated the number of the pieces, the age and race of the cattle, and the name of the owner, and equally accompanied by a letter to the inspector of the market, &c. &c., as is mentioned in the foregoing paragraph.

A similar proceeding may be managed, if the place be situated near a navigable river, and where the apparently as yet sound meat may be dispatched upon this way (without deviating from the proper course) to a large town. But if no railway exists in the neighbourhood, the seemingly sound beasts are to be slaughtered in the plague house, and the carcases disposed off, as mentioned above.

The usual compensation is granted as above, even to owners who have been guilty of violation of the plague regulations, and were even condemned to penalties and loss of goods.

β. Proceeding where the plague is extensively spread.

§ 52.

If the investigation shows that the plague has already reached a greater extent, and that numerous beasts diseased or suspected of the disease exist in various farms, or that numerous cases of the plague have been kept secret, or that healthy beasts had been allowed to mix with the diseased ones, so that the killing of both categories would be useless, as the cost of their destruction would hardly be in proportion to their value, or in any way be the means of checking the further spread of the disease; in such a case the Commissioners must think of other steps how to remedy the evil.

These consist in the establishing two sorts of quarantine asylums, according to § 23, one for the real infected beasts, and another for the merely suspected ones; while both divisions are to have separate attendants, who are not to come in contact with any individual of the community. The necessary provender for the cattle, and their drinking water, as also the food for the attendants themselves, must be brought by some appointed porters to spots some distance off these asylums, where they are to deposit them and soon remove from these spots, when they are taken up by the attendants. If there are in an infected farm numerous heads of cattle, they are to be parcelled into 5 or 10 heads, and each division strictly separated from the other, so that every one of such divisions is to have its own attendant, who is not to come into contact with any of the other divisions. Where such remote separate stablings are impossible, the divisions may be brought under separate groves or fenced places. The use of such divisions consists in the circumstance that the infection cannot be imparted to the other divisions though the plague has broken out in one of them. Should any one beast be attacked with the disease, it must at once be transported to the plague stable, while the division is to be kept in utter seclusion for 10 days, when it will appear if any other beast is similarly attacked. Should, however, local circumstances render these measures impracticable, the diseased cattle are to be left in their stables, while the merely suspected ones are to be carried elsewhere, such as horse or sheep stables, which localities are to be kept under strict seclusion; these measures do not, however, warrant the rapid extinction of the plague, nor its spread elsewhere, or the immediate cleansing of the infected localities. If a place where the plague has already made vast progress is situated near a railway, and not too remote from a large town, great loss of property may be obviated by dispatching the merely inspected or sound cattle at once to that town, and dispose of them (after they are slaughtered) as indicated in § 51.

Further measures against the plague prevalent in a place.

§ 53.

As soon as it is a known fact that the plague has broken out in a place, other measures, independent of those of slaying the cattle or putting them in quarantine asylums, are likewise immediately to be taken.

1. The outbreak is without delay to be notified to the neighbouring communities, and request them to follow out the directions in § 47.
2. The inhabitants or the infected place itself are to be instructed on the nature of the malady and its contagious powers, as also on the manner how to preserve their cattle from infection, and to publish for their instruction the often-repeated penalties contained in § 400—402.
3. The infected place is to be closely secluded, while in its avenues and streets are to be placarded tables, in which is to be written legibly in the vernacular tongue the sad news of the appearance of the plague. Also every house in which the plague has broken out is to be marked by some stricking sign, as a house where the plague is raging, while all intercourse of its inmates with those of healthy localities is to be prevented even by means of the military and gensd'armes, so long and until the cleansing of the infected stables, implements, and clothes of the inmates has been accomplished.

   The intercouse of the inhabitants with the neighbourhood, the visits to the neighbouring churches, schools, and pleasure resorts, and even the carrying of grain to the neighbouring mills, must for the present be interrupted.
4. All vehicles in the place and its vicinity can only be driven by horses, while the horned cattle must remain confined in their stables, until the plague has entirely ceased, and the permission of intercourse is officially notified. The doors of the stables are to be so closely locked that neither dogs, cats, nor fowls shall be able to slip through. Dogs found running about in the streets are to be caught, confined and

chained, or killed, because these animals may easily introduce the plague elsewhere.

5. The entrances leading to the place are to be guarded by reliable watchmen or military, who have to see that neither cattle nor their products are to enter or exit, as also to refuse entrance to individuals who deal with such products.
6. The holding of cattle fairs in the place itself or in its environs (within a circle of three German miles), as also the buying and selling of horned cattle, the sale of meat, milk, &c., as also the emigration of the inhabitants together with their cattle, are prohibited so long as the plague lasts.
7. The removal and interment of the cadavres are to be effected according to § 28; with regard to the handling of the skins, horns, hoofs, and bones, rules are given in § 29.
8. Every empty stable infected by the diseased cattle is to be immediately and carefully cleansed, according to the prescriptions contained in §§ 30 and 31. As the fate of the future cattle, and in short of the whole stock of the community, chiefly depends on this manner of disinfection, it is to be confided not to the inhabitants themselves, but to particular confidential persons who do not possess any horned cattle, and who will do the work under inspection of the police or gensd'armes, and by means of horses employed for that purpose.
9. To meet the crimes of concealment of the sick cattle or secret removal of suspicious parts, a revision is requisite of the existing stock of cattle, keeping in mind all the afore-named safety measures to prevent the acting officers themselves from carrying the infection elsewhere.
10. The Commission is empowered to enforce obedience to the prescribed regulations by all means possible, even by calling to their assistance the military, and to report to the superior tribunal their judgments, sentencing the disobedient either to imprisonment (not exceeding 3 days) or to a fine (not exceeding 50 florins =£5).
11. Should the plague break out in the stable of a large town where horned cattle are only kept for the sake of dairy milk, and where no pastures exist, it is sufficient to close and seclude the dairy, and insisting upon the immediate sale to butchers of the cattle suspected of the malady.
12. If the plague breaks out amongst a herd which are only kept upon pasturing fields or commons, the prescribed regulations are to be modified according to circumstances, but strictly insisting upon the separation of the diseased from the apparently sound beasts, and prevent the former from mixing with other cattle.
13. A medical treatment of the cattle plague can only be allowed in places where the plague has so increased in magnitude as to render the application of the *club* of no avail, and under circumstances which necessitate the establishment of quarantine.

    So long, however, as there is hope that the plague may quickly cease by the measures indicated in § 51, all other attempts at remedial cures are strictly prohibited, as they may be the very occasion for introducing the malady elsewhere, or to prolong its existence, and increase the losses already incurred; but in places where such attempts have been of notorious efficacy and success, the veterinary surgeon is allowed to make his experiments, but only on the diseased beasts alone, and dare not come in contact with either the inhabitants or the sound and merely suspected animals.
14. The plague may only then be declared to have ceased in a place, when all the conditions enumerated in § 38 have been fulfilled, and more especially when the cleansing of the stables and implements have been completely accomplished, the refuse and animal produce duly treated, the final revision undertaken, and the term of 21 days after the last case of recovery or death had expired without a renewal of the malady in the interim.

Division of the infected Country into Plague Districts.

§ 54.

If the plague is spread over an extensive district it is to be subdivided into smaller circles, to facilitate inspection, and to appoint in each a Commission according to § 11 and 53, sub. 10. Should there not be a sufficient number of official veterinary surgeons in the place to carry out the medical regulations, a report to that effect must in every case be sent by the local authorities to the provincial tribunals, that a military staff of surgeons may be called to the assistance. The Commission is bound—

(*a.*) To become acquainted with the exact number of the cattle stock in the circle.
(*b.*) To order the requisite official regulations.
(*c.*) To appoint in every locality in the vicinity a veterinary surgeon, and a gend'arme or policeman to watch over and enforce the execution of the measures.
(*d.*) To impress the mind of both with the necessity of doing their duties detailed to them by the Commission.

Inoculation.

§ 55.

The vaccination of the plague with consent of the provincial authorities can only then take place in localities where the plague has already extensively spread among the cattle, and where, in consequence of the numerous points of contact, there is reason to believe that the greatest part of the stock must inevitably and gradually fall a victim to the disease.

Such vaccination is only permissible for the purpose of shortening the duration of the plague, and of possibly allowing the burdensome seclusion of the place to be abolished quickly; but it is prohibited to practise it in places where the plague has just broken out, and where it may be hoped that the official measures will be of use to limit its spread, and effect a perfect cessation of the disease.

It is understood that wherever the veccination is allowed, no modification of the measures already named above can take place.

PRUSSIA.

TRANSLATION of INSTRUCTIONS issued by the PROVINCIAL ADMINISTRATION of BRESLAU in 1856, and communicated by the PRUSSIAN GOVERNMENT to the Authorities of other Provinces of the Kingdom.*

(*Extracted from Horn's "Preussische Veterinär-Medicinal-Wesen" transmitted by Lord Napier. Translation furnished by the Foreign Office.*)

The Cattle Plague, which has broken out in our Department, once more requires us to call attention to the punctual adoption of the directions contained in the "Patent on the Diseases of cattle" of the 2d April 1803, and in the rescript of the Home Office of the 8th November 1813, which follow here in abstract.

1. *Duty of giving Notice.*

§ 1. In the whole of the department every cattle owner is bound to give notice of every suspected attack of disease.

It is especially considered to be suspicious if at any place two beasts die within 14 days out of a stock of about 50 head or three or more out of a larger stock.

§ 2. Within a circle of two German miles around infected places every cattle owner must also give notice of the smallest trace of sickness in his stock.

§ 3. The duty of giving notice is not limited to the owner, but is incumbent on every one, particularly on cattle doctors, herdsmen, and skinners.

2. *Inspector of Sound Cattle.*

§ 4. In every place attacked by the malady one inspector of sound cattle (and more in case of necessity) shall be forthwith appointed.

He shall be bound—

(*a*) to inspect every day all stables not yet attacked;
(*b*) to take care that every beast in any way sick shall be separated;
(*c*) to be present at slaughtering every beast in order to cause any that may be suspicious to be carried away and buried forthwith.

3. *Separation.*

§ 5. Every beast perceived to be in any way suspiciously sick shall be forthwith isolated.

The best way, as a rule, of doing this is to remove the sound cattle from the infected stable, and to dispose of them in other places.

These compartments are to be made as small as space and opportunity in any way permit.

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* The Prussian Regulations on this subject are very strict and minute. They date from the year 1803. These Instructions have been selected as containing a concise summary of them.

§ 6. The infected stable shall be at once shut up, and shall so remain after the removal of the sick beast, which is to be effected as speedily as possible, until it be disinfected in accordance with directions.

The closing shall be effected by a lock, the key to which shall be kept by the inspector of sick cattle. Moreover, the stable shall be officially sealed by means of a strip of linen.

§ 7. While the malady lasts every beast in infected places shall remain in the stables, and may not be used in any way for draught or field work.

4. *Removal of Sick Cattle.*

§ 8. Every beast in anyway suspiciously sick shall be forthwith carried away alive to the first quarantine stable.

This is to be done by an appointed cattle conductor.

The removal shall take place through paths which are not trodden by other cattle.

§ 9. If the sick beast, by reason of too far advanced weakness, is unable to walk by the road it shall be killed on the premises, and shall be treated as a beast that has died.

5. *Slaughtering of Sick Cattle.*

§ 10.—

(*a*) Every beast sick of the plague shall be killed here without ceremony, and buried according to directions.

(*b*) Every suspected beast shall likewise be slaughtered.

If the existence of the plague be once certainly shown, it is better that perhaps once or so a beast sick of another malady should be killed as suspected of plague than that too much minuteness should be used in examinations.

(*c*) If the plague breaks out first in a district upon a solitary establishment where the stock is not above ten, the whole shall be killed even though they should be sound.

(*d*) In the same way, the two beasts shall be killed which stood on each side of any sick beast, although they might appear to be sound.

(*e*) If a fresh outbreak should take place in one of the small compartments in which all the sound cattle of the establishment were shut up after the infection of the stable the whole compartment shall be killed.

It is especially of the utmost importance and is most sure to contribute to the prompt extinction of the plague that every beast attacked at the very commencement of the malady be forthwith killed and put away without taking too much trouble in examination in the quarantine stables.

6. *Burial.*

§ 11. The slaughtered cattle shall be at once buried in the burying-ground.

The same shall be done with those which die in the place.

The burying-place is to be made not too far from the establishments, upon a spot as solitary and desert as possible.

§ 12. The graves must be from six to eight feet in depth.

§ 13. All flaying or secret burying is forbidden.

The hide must previously be cut through sufficiently (ausreichend) and the carcass covered over with unslacked lime.

7. *Slaughterers.*

§ 14. A competent man shall be appointed—

(*a*) for slaughtering the cattle;

(*b*) for carrying away the dead by means of a cart or sledge drawn by horses;

(*c*) for digging the graves, and burying.

8. *Quarantine Stables.*

§ 15. In order to decide in doubtful cases of sickness, the cattle may be submitted to an observation, which shall not, however, extend beyond 48 hours.

Any beast that shall appear to be sick after this interval, shall be at once killed, to be decided by the inspector of the sick beast.

The observation to be made in the first quarantine stable, which, as a rule, is to be established for three to four head immediately after the outbreak of the malady, and in the neighbourhood of the burying place.

If a beast is admitted to be sound after 48 hours' quarantine, it shall be brought to the second quarantine stable, which can hold five to six head, and shall be left there until its release be ordered by the authorities. The stables may be put up slightly with planks; they shall be placed at a suitable distance from each other, and must be closed by the necessary attendants.

9. *Shutting-up.*

§ 16. In addition to the special closing of the infected and quarantine stables, there shall be, according to circumstances, a closing of the yards and hamlets (ortschafte);

(*a*) Closure of infected premises shall take place, except in harvest time, always and everywhere, and shall begin at once, if a suspicious malady shows itself. It shall apply to men, cattle, and things. The only exceptions are the persons employed in extirpating the malady, as also the clergy, medical men, and midwives, if their presence be required on the premises.

(*b*) Closure of hamlets may be either absolute or relative, according to circumstances.

Absolute closure shall always take place when three establishments are attacked in hamlets where there are less than 20 cattle owners. The same shall take place when four are attacked in the case of 20 to 30 cattle establishments, and when five in case of a greater number.

Only large cities or trading towns are closed relatively.

Absolute closure includes the whole territory (feldmark) with the quarantine stables and burying-place. It is for men, as well as cattle and things, and must be as perfect as if the place in question were shut out from the land; all passage through the closed place ceases. Roads and posts are to be stopped.

Relative closure takes place in all other cases; it consists in guarding the place with the object of preventing either cattle or things capable of infection, or men from coming out, who may have had any communication with cattle.

Men who have had no communication with the cattle must prove this by the attestation of the appointed inspector.

§ 17. The closure is effected by trustworthy watchmen, who themselves must have no intercourse whatever with the closed localities, or with what is in them.

In any given case of necessity, military aid is to be required of the Government for securing closure.

§ 18. All necessary provisions, fodder for cattle, clothes, &c. to be supplied to the enclosed inhabitants, guards, &c., must be laid down by the guards at a distance of at least 100 paces from the closed localities, and after their departure must be fetched by the enclosed persons.

§ 19. The surrounding hamlets also must be defended by an appointed watch from the forbidden entrance of cattle, of things liable to infection, and of men.

10. *Further Limitations of Intercourse.*

§ 20. All communications between sick and sound cattle, between men and things, which have come in contact with the same is prohibited. This holds good as well for communication inside as out of the place. Likewise especially for all watchmen and inspectors, as well as for all persons who deal with cattle, meat, tallow, hides, horns, hair, &c.

§ 21. All cattle markets are stopped in infected places, and within three German miles from the same.

§ 22. Likewise all retail, wool, and weekly markets in infected places.

§ 25. All trade in cattle and rauchfutter (?) from the infected place to the outside is unconditionally prohibited.

§ 24. All trade in cattle and rauchfutter (?) must, as a a rule, cease, both in the infected place, and in the neighbourhood, within three German miles. Such trade may, exceptionally take place among the non-infected farms of the hamlet, under the strict control of the police authorities, but only for the necessary supply of the farms, and with such necessity attested; as also for slaughtering. And the same shall hold good among the farms within a radius of three German miles.

§ 25. This limitation of cattle trade and business shall continue for two months after the cessation of the malady, and trade in cattle cannot be carried on without the permission of the district authorities for the two months following.

It is of course understood that the resumption of the empty forms also is not to take place before the lapse of this period.

§ 26. The fodder placed over the stables of the sick is to be used solely by horses and sheep.

§ 27. In infected places, and in the country, three German miles round, all dogs are to be kept chained, and all cats and poultry shut up.

11. *Cleanliness.*

§ 28. Servants may not leave their service without complete and attested disinfection, when the farm is infected in which they have been serving.

§ 29.—

(*a*) If the sound cattle cannot, for want of opportunity, be removed from the infected stable, the dung

must be taken away twice a-day and buried two feet deep in the garden, or behind the farm.

This holds good likewise for the quarantine stables.

(*b*) And the dung must be taken away twice a week from the stables not infected.

(*c*) Dung, blood, slime, &c. coming from a sick beast, especially while it is on the way to the quarantine stable, must be buried.

(*d*) All fluids coming from an infected stable from the first appearance of the malady must be conducted to a special cesspool of sufficient depth.

(*e*) Men who have necessarily to do with diseased cattle must clean their persons, change their clothes, and keep themselves from any communication with diseased (? sound) cattle and their owners.

12. *Duration of Arrangements.*

§ 30. All the above directed arrangements are to be continued for four weeks after the last death of a diseased beast, except in the case where a longer term has been prescribed.

13. *Disinfection.*

§ 31. See the Annexe.

14. *Control of the Arrangements.*

§ 32. In addition to the above-mentioned inspector of sound cattle, conductor of sick cattle, attendants and slaughterers of the same, a superintendent shall also be appointed for the sick cattle, whose chief duty shall be to order and carry out every measure which may be rendered necessary on account of contact with the diseased cattle; that is to say, he must twice every day look over the farms where the malady has shown itself; attend to fresh notices of disease; look after the insulation, removal, slaughtering, and burying; attend to confining, disinfecting, &c.; and give an account of everything.

§ 33. The Inspector of the place who shall be appointed must first of all examine everything, keep a diary, and make his report. The police authority of the place may make the appointment.

§ 34. All these persons must be furnished with special directions by the authorities, and be sworn to carry them into execution.

§ 35. The chief direction, with the aid of the doctor and veterinary surgeon of the district, if necessary, is in the hands of the Landrath, who will give notice forthwith to the Government of every fresh outbreak—of its evidence, its extent, and of the measures actually employed.

In 14 days at furthest, and if the malady is especially violent, at least every 8 days, a further report must be made to the Government upon the course of the malady, the number of cattle attacked, died, and slaughtered; the measures taken, any hindrances, &c.

The exciting mode of treatment customary elsewhere is unsuitable in the Cattle Plague, and in any case of lassitude must be met by severe penalties.

15. *Prohibition of Medical Treatment.*

§ 36. All medical treatment of diseased cattle is strictly forbidden.

§ 37. The same holds good for recommending and publicly advertising remedies.

16. *Penalties.*

§ 38. The penalties pronounced in the "Patent" for offences against the legal prescripts are very severe, and frequently mount to several years' confinement in the house of correction.

Every one should make himself acquainted therewith, and act strictly in accordance thereto.

17. *Publication.*

§ 39. But this extract is to be posted up in infected places, and in places within three German miles of circuit, at public houses, and at church doors; likewise copies are to be given to all persons who are interested therein.

Information upon the indications of Cattle Plague in the living and dead beast, as also a specification of the precautionary measures requisite to protect cattle from infection is contained in our official paper of this year (No. 24. Extraordinary Supplement).

Breslau, 16th June 1856.

Royal Government Home Department.

ANNEXE.

Process of Disinfection in the Cattle Plague.

GENERAL RULES.

§ 1. The disinfection applies to everything which may in any way have been in communication with the contagious matter of the Cattle Plague; persons, articles of clothing, stables, farmyards, places of burial, and quarantine, furniture and vessels.

§ 2. The disinfection of persons, their dress, things, &c. is effected, not only at the termination of the malady, but as often as possible while it is going on.

§ 3. The disinfection of localities which have been kept closed until then should not be commenced until fourteen days after the last case of sickness, if any sound cattle remain on the premises.

But the interval may be reduced to eight days when the place and the opportunity allow of such arrangements that the cattle thereon are perfectly secure.

But a powerful chlorine fumigation should be made as a preliminary in the infected stable as soon as it is empty.

§ 4. It is best that everything of no especial value should be entirely destroyed, and it is much to be recommended, that people should not be sparing about this. The destruction should, according to circumstances, be effected by burning or by burying very deep.

§ 5. A small disinfection room should always be established near the infected localities, in which the requisite chlorine fumigation should be applied.

§ 6. An especial disinfector should be everywhere appointed, who should be immediately responsible for the execution and completeness of the disinfection.

For this purpose it is best to take a veterinary surgeon or sanitary attendant (Heildiener) or inspector of diseased cattle.

§ 7. Whenever a disinfection is completely finished, a written report is to be prepared by the disinfector, and always to be laid before us for inspection.

II. PROCESS OF DISINFECTION.

1. *For Persons.*

§ 8. Persons must—

(*a*) Be exposed to a moderate fumigation with chlorine gas for 10 minutes.

(*b*) Change their clothing.

(*c*) Wash their persons thoroughly with soap.

2. *For Clothing.*

§ 9.—

(*a*) All their clothes must first of all be exposed to the action of chlorine.

(*b*) Everything washable shall be put into lie (*sic*) and washed with the same. This includes all tissues of linen and wool.

(*c*) All woollen stuff, skin, &c., will then be exposed to a stronger chlorine fumigation, and after that to a high temperature; they must then be hung up on poles separately and aired eight days at least.

(*d*) Shoes and boots, also sticks, demand very especial attention, because dung and muck, the most usual carriers of the matter of contagion, stick to them.

They must, therefore, if they are preserved, be washed in strong lie, with particular care, and exposed to strong chlorine fumigation for 24 hours.

3. *The Stables.*

§ 10.—

(*a*) If dung or other dirt remain in the infected stables, the same must forthwith be buried two feet deep in a remote place.

(*b*) The floor is to be taken up. If it be of wood, it must be burnt, if of stones, they must be washed, and allowed to remain four weeks in the open air.

(*c*) The earth must be dug out to the depth of two feet, and the same as is prescribed for the dung, must be done with it.

(*d*) Cribs and racks of wood, any loose planks, and such like valueless objects, such as the vessels used by the sick cattle, (drinking and milk vessels), bits of furniture, rope, &c., must be burnt.

(*e*) All other things such as wood-work in the stables (posts, beams, windows, &c.) which cannot be burnt must be washed with strong lie, and exposed for 14 days to the passage of the open air.

(*f*) Stone walls must also be washed, plastered walls must be scraped deeply, and covered anew with clay and lime.

(*g*) Lastly an energetic fumigation with chlorine must be again employed for 24 hours, and then the empty stable must be exposed to the free-passage of the air, until the expiration of the term fixed by law.

(*h*) The quarantine stables should, as a rule, be burnt on the spot.

If there be still dung or other muck in other stables, or in the dung-pit of the infected farm, it shall be forthwith carried by horses to the field and ploughed in, or if this be not possible for the moment, it should be scattered about.

A workman must walk behind the waggon, and immediately shovel in again anything that may fall out.

The horse and the labourers must not communicate with the cattle. The latter must be disinfected when their work is done; the former must be watered (geschwemmt).

No cattle must go into the field for four weeks.

4. *The Implements.*

§ 11. The carts (sledge, waggon) upon which a dead or slaughtered beast has been carried to the burying place must be burnt, together with the harness used.

Dung carts according to rule are served in the same way, and it is therefore proper to employ the same carts in carrying away the dung.

When this is not done, and the waggon employed is to be preserved it must be washed with hot lie under particular precaution, and for a long time be exposed to the open air.

A very especial attention is to be given to dung-forks and mattocks, and they must be made red hot.

5. *The Cesspools.*

§ 12. Any cesspools made upon the farm must be filled up with earth and covered in with stones.

6. *Burying Places.*

§ 13. Burying and qrarantine places must be surrounded with hedge and ditch and overlaid with a pavement of stone, which must remain for two years.

III. Preparation of Chlorine.

§ 14. The simplest and easiest way of procuring chlorine, is to pour four loths (about two oz.) of diluted sulphuric acid upon the same quantity of muriate of lime (chloride of calcium) in an earthenware saucer.

Such a saucer will be sufficient for the disinfection of about 100 cubic feet of space.

Still cheaper is the so-called chlorine-fumigation of Guyton Morveau. To prepare this, a mixture must be made of two parts brimstone and three parts common salt (muriate of soda) and an equal quantity of diluted sulphuric acid must in like manner be poured upon it.

See the precautionary rules to be attended to in the chlorine fumigations in our directions in the process of disinfection of sanitary attendants which are distributed everywhere.

LONDON:
Printed by GEORGE E. EYRE and WILLIAM SPOTTISWOODE,
Printers to the Queen's most Excellent Majesty.
For Her Majesty's Stationery Office.

SECOND REPORT

OF

THE COMMISSIONERS

APPOINTED TO INQUIRE

INTO

THE ORIGIN AND NATURE, &c.

OF

THE CATTLE PLAGUE;

WITH THE

MINUTES OF EVIDENCE AND AN APPENDIX.

Presented to both Houses of Parliament by Command of Her Majesty.

LONDON:
PRINTED BY GEORGE EDWARD EYRE AND WILLIAM SPOTTISWOODE,
PRINTERS TO THE QUEEN'S MOST EXCELLENT MAJESTY.
FOR HER MAJESTY'S STATIONERY OFFICE.

1866.

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SECOND REPORT

OF

The COMMISSIONERS appointed to inquire into the ORIGIN and NATURE, &c. of the CATTLE PLAGUE.

TO THE QUEEN'S MOST EXCELLENT MAJESTY.

SINCE our First Report was submitted to Your Majesty, the disease has continued to spread, the ratio of its advance fluctuating much in different places, but presenting something like uniformity on the whole. The total number of reported cases from the commencement was—

Oct. 7 - - - -	11,300
Nov. 4 - - - -	20,897
Dec. 2 - - - -	39,714
Dec. 30 - - - -	73,549
Jan. 27 - - - -	120,740*

It has thus nearly doubled itself at intervals of four weeks.

These figures, however, formidable as they are, by no means represent the real amount of loss and suffering inflicted by a calamity which ravages some districts while it spares others. A pressure, which would be less if distributed over a large area, is ruinous and crushing when those on whom it rests are comparatively few. Cheshire, for instance, which depends in great measure upon its dairy stock, has had, up to the 27th January, 17,971 cases of disease; Forfarshire 10,099, Lanarkshire 4,371, Cambridgeshire 4,364, Lincolnshire 4,080, Norfolk 4,063, Yorkshire 19,331; and the records of particular villages and farms where the disease has raged would tell a still more distressing tale.

The great breeding districts of the United Kingdom, into which in ordinary times cattle are but rarely and casually imported—Ireland, the North and West Highlands of Scotland, including the counties of Argyle, Ross, and Sutherland, and the whole of Wales except Denbighshire and Flintshire—have hitherto enjoyed an entire immunity. The disease has for the most part established itself, by direct importation from London or from Holland, at various centres on the eastern side of the island, and thence has travelled towards the west or south-west, traversing alike low and elevated lands, and not apparently influenced by varieties of soil. It has moved irregularly, leaping not unfrequently from one point to another at a considerable distance, but seems generally to have followed the course of highways and ordinary lines of cattle traffic. A careful observer,† who has attentively watched its progress through his own district, states that, whilst it often passes one stock and attacks another at a greater distance from a centre, it invariably returns as it came to the one passed. "This passing," he says, "is only apparent: it is owing to one stock being more predisposed to the disease than the other; that is, the one attacked has less power of resistance to the poison than the one that apparently escaped it." The means by which it has transported itself to new centres can in a great number of instances be traced with certainty, but they often elude detection.

In the contagiousness and the mortality of the disease there has been no abatement, as the subjoined tables, compiled from the weekly returns published by the Veterinary Department of the Privy Council Office, will shew.

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* These returns do not profess to give the total number of cases which have occurred in Great Britain, but only those which have been ascertained from the official information received from Inspectors.

† Dr. Moffat, of Hawarden, Flintshire.

Of the total number of cattle on farms, in sheds or other places, where the disease has been officially reported to exist (after deducting those slaughtered healthy), there were *attacked* in every 100 :—*

Up to November 4	- -	44	
„ „ 11	- -	43	
„ „ 18	- -	44	
„ „ 25	- -	44	
„ December 2	- -	44	
„ „ 9	- -	50	
„ „ 16	- -	51	
Up to December 23	- -	51	
„ „ 30	- -	51	
„ January 6	- -	51	
„ „ 13	- -	52	
„ „ 20	- -	53	
„ „ 27	- -	54	

Of the total number of cattle known to have been *attacked* by the disease, there were in every 100 :—†

	Killed.	Died.	Recovered.	Unaccounted for.
Up to November 4 -	36	43	5	15
„ 11 -	34	44	5	15
„ 18 -	32	46	6	14
„ 25 -	29	48	7	15
Up to December 2 -	27	50	7	15
„ 9 -	24	51	7	15
„ 16 -	22	53	8	15
„ 23 -	20	54	9	15
„ 30 -	18	56	9	15
Up to January 6 -	17	57	10	14
„ 13 -	16	58	10	14
„ 20 -	15	59	11	14
„ 27 -	13	61	11	13

Taking actual numbers instead of per-centages, there were, out of the 120,740 cases of disease reported up to the 27th January—

Killed diseased.	Died.	Recovered.	Unaccounted for.
16,742	73,750	14,162	16,086

From the above figures it will have been observed that as the number of diseased animals *killed* has diminished, the per-centage of *attacks* among the animals exposed to infection has increased, whilst the per-centage of *deaths from disease* among the animals attacked has risen still more steadily, and in a greater proportion. Were slaughtering entirely abandoned, the recoveries would probably not exceed fifteen per cent.

All breeds of cattle appear to be subject to the disease; but the more highly bred the animal, the sooner, generally speaking, it succumbs. English stock, compared with foreign breeds, seem to have less power of resistance. Of the Dutch it has been observed in this country, that although not perhaps less liable to be attacked than other varieties, they survive the first attack longer, and more of them recover. Animals in good condition, says another observer, resist the longest; but, if they become diseased, the disease runs its course in them more rapidly.

Of the influences of weather and temperature nothing definite can be said. The long drought of the summer has been followed by copious and almost incessant rains, with continued south-westerly gales. The disease increased in intensity with the advance of winter, and it has travelled commonly in a direction counter to that of the prevailing winds. It is proper to add that the year has been peculiarly favourable to the spread of zymotic diseases generally, and to the rapid decomposition of organic matter.

We have endeavoured, but without success, to obtain specific information as to the introduction of the disease into this country. Inquiry has been made, with this object, of the several persons through whose hands the cargo of bullocks imported from Revel in May passed after their arrival at Hull. This cargo, it will be remembered, was divided, on landing, into two portions: part were disposed of through salesmen in different towns in the North of England, and the rest sent to London and sold to butchers in small lots, a lot of twenty being bought and sent to Gosport by a Government contractor. Questions have been addressed to all these persons, and from their answers we have no reason to doubt that all the animals were bought and slaughtered, so far as

* Decimals are omitted.
† Decimals are omitted. The sum of the figures, therefore, in each horizontal line will not be exactly 100.

the purchasers could judge, in a perfectly healthy state. With respect to the diffusion of the disease in the Russian Empire itself (setting aside the steppe provinces in Europe and Asia), we have no satisfactory evidence. In the Baltic provinces it does not seem to have shown itself last year. There were many scattered outbreaks (which indeed are frequent) in Central and Western Russia; and it raged with considerable violence between January and May in the Government of Kowno, which is very near to the port of Memel,* and between January and July in that of Volhynia, which borders on the Gallician frontier, and from whence cattle may be easily driven to the eastern terminus of the Vienna and Lemberg Railway. A subsequent outbreak occurred in Kowno in November, and led to the immediate enforcement by the Prussian authorities of the stringent regulations which the law of Prussia orders to be applied to the frontier of an infected district. The theory that the disease originated in the London cow-sheds is inconsistent, not only with the evidence appended to our First Report, but with that which we have since received. The careful observations made by Dr. Ballard, Medical Officer of Health for St. Mary's, Islington, confirmed by those of the Medical Officers for Marylebone and St. Pancras, and the experience of other metropolitan districts, are in direct conflict with this theory, and point distinctly to contagion as the means by which the Plague was originated and propagated in London.

II.

We adverted in our First Report to the outbreak of the plague in Holland. Weekly returns of its progress in the Province of South Holland, to which until recently it was practically confined by strict measures of police strengthened by a military and naval cordon, have been published by the Dutch Government, in a form closely resembling those issued here by the Veterinary Department of the Privy Council. From these returns it appears that the total number of cases, which was 4,084 on the 7th October and 6,744 on the 4th November (the attacks having diminished in the intervening weeks), rose by the 2d December to 11,348, and by the 30th December to 21,437, nearly doubling itself in each month. The increase is attributed to the removal of the cattle from the pastures to their stalls, the close contact causing the infection to run its course more rapidly. During the last three weeks there has again been a gradual decrease. "In one respect, however," says Mr. Ward, Secretary to Your Majesty's Legation at the Hague, in his Report on this subject, dated 10th January 1866, "the "last return presents an unfavourable appearance. Out of seven places in which the "breaking out of the Plague is reported for the first time, it is stated that the origin of "it cannot be traced to any contagious medium, contrary to the opinion of high "authorities upon the subject, that every case would be found so traceable. Again, "though in the original focus of the disease a diminution is announced for the first time "since the commencement of it, yet in other cases where it has long raged it has "assumed a more aggravated character. The area over which it has spread is also "increasing. Returns have been made for the Province of Utrecht, in which a few "isolated cases in the early part of the season had been followed by an entire cessation "of the scourge, shewing, for the week ending December 30, 349 new cases, 165 deaths, "2 slaughtered, and 146 recovered; making a total of 1,104 cases, 394 deaths, 27 "slaughtered, 316 recovered, and 367 still under treatment. The Provinces of North "Brabant and North Holland have also been invaded, according to the latest accounts, "though no official returns of the extent of the visitation have yet been made." The rate of mortality in Holland, we must add, is considerably lower, as Mr. Ward observes, than in this country. The latest Returns issued since the date of his Report show that out of 29,031 cases, the total number in South Holland, 7,410 were slaughtered, 8,966 died, and 9,896 (or about 34 per cent.) recovered; and these proportions have not very materially varied since the commencement; whilst in Utrecht, where the number slaughtered has been inconsiderable, there have been 926 recoveries to 790 deaths. The Dutch Government appears to have placed its chief reliance on the maintenance of the cordon drawn around the most infected Province, which permits no egress, nor, except under most stringent restrictions,† any ingress of cattle. A further exception, however,

* No cattle, however, were imported into the United Kingdom in 1865 from any Prussian port.

† Under an order in the *Nederlandsche Staats Courant* for 30th November 1865, no animal is to be introduced without (1) evident need, (2) a licence granted by the burgomaster of the place of destination, and (3) *visé* by the burgomaster of the place of despatch, who must have satisfied himself by (4) a declaration of some competent person (*bevoegd deskundige*) that the beast is sound and from an uninfected place; and the licence must also be (5) approved by the Royal Commissary for South Holland. The animal must (6) be accompanied by a person appointed by the burgomaster, and (7) given in charge, on arrival, to one or more appointed persons, and (8) slaughtered within a short fixed period.

is made in favour of through traffic, and the Dutch-Rhenish Railway, which conveys weekly large quantities of cattle for exportation to England, passes through the heart of the enclosed district. The enforcement of other internal regulations has been left to the local authorities, except that the Government has interfered to close markets where the authorities of the commune had refused to do this. Some difficulty seems also to have been experienced in inducing the people to submit to restraint. We are told that "in "the Province of Utrecht the action of the authorities is resisted by force, and has to be "supported by military detachments. There are cases in which the troops are beaten off "by large bands of peasants, and have to take the cow-sheds by regular siege.*"

The Cattle Plague in Belgium has been made the subject of a careful and interesting Report by Mr. Barron, your Majesty's Secretary of Legation at Brussels. The energetic measures adopted by the Belgian Government have been completely successful. The total number of cases in that country has not exceeded 306, of which 17 died and all the rest were slaughtered. "The localities," says Mr. Barron, "where it was at first mistaken "or concealed are those which have had to struggle the longest to dislodge it. On one "farm at Leffinghe the whole herd of 40 were killed between November 23d and "December 8th. Three weeks after, on December 30th, the same disease broke out "among the sheep, and the whole flock of 112 were sacrificed, 11 as diseased and 101 as "suspected. The carcases of the latter, being perfectly sound, were sent for sale to "England." One case lately occurred at Antwerp on a milkman's premises, and was traced to a smuggled cow. The market was at once closed, and all egress of cattle from the town prohibited until further orders. The ravages, however, which the Plague continues to make in South Holland, and its threatened advance into North Brabant, naturally excite great apprehension in Belgium; and a short Bill has just been introduced by the Government, which, if passed, will vest in the Executive powers virtually unlimited over both internal traffic and foreign commerce.†

Nor has the disease been suffered to gain a footing in France. An animal bought at Malines immediately before the promulgation of the decree of the 5th September had been the means of introducing it, but it was promptly suppressed, at a total cost, says the Minister of the Interior, in an official report to the Emperor, of not more than 43 head. It reappeared in November, in the *Jardin d'Acclimatation* of the Bois de Boulogne, having been carried thither by two gazelles brought from India, which had been for three or four days in London. From them it rapidly spread to yaks, zebus, goats, and fallow deer, and the sacrifice of about 35 of these animals was necessary to arrest its progress.

III.

As the disease has extended itself in this country, several Orders in Council have been issued. The general result of these orders has been (1) to circumscribe the powers of the inspectors; (2) to enlarge those of the local authorities; (3) to replace the latter by new local authorities, with a new sphere of jurisdiction. The inspectors were deprived of the power to slaughter, except in cases where the owner had disobeyed the inspector's order for the separation of sick animals from sound; the local authorities were armed with power to prohibit animals from being brought within their jurisdiction, except under such conditions as they might think fit to impose; and the Secretary of State was empowered to close a fair or market in any district where the local authority had refused to do so, on a complaint from the local authority of a neighbouring district. Finally, for the Justices of Peace in each petty sessional division of a county were substituted the Justices of Peace for the county in General or Quarter Sessions assembled; the area of jurisdiction being enlarged accordingly, and the power of restraining traffic so extended as to restrain the movement of cattle within each area as well as ingress into it, but not mere transit or egress by railway.

Under the powers thus created Orders of Quarter Sessions have been made in every county of England and Wales prohibiting or restricting generally the movement of cattle

* Mr. Barron's Report. This is confirmed by the last Report of the Minister of the Interior.

† The whole Bill is as follows :—

"Art. 1. Le Gouvernement est autorisé à prescrire par arrêté royal les mesures que la crainte de l'invasion ou l'existence de maladies épizootiques, peut rendre nécessaires, tant dans l'intérieur du pays que sur les frontières, en ce qui concerne les relations de commerce avec l'étranger.

"Art. 2. Un règlement déterminera les conditions et le taux des indemnités qui pourraient être accordées aux détenteurs d'animaux malades ou suspects dont l'abatage serait ordonné.

"Art. 3. Les infractions aux dispositions prises en vertu de l'article 1er, seront punies d'un emprisonnement de trois mois à deux ans et d'une amende de cent francs à mille francs, soit cumulativement, soit séparément.

"Art. 4. S'il existe des circonstances atténuantes, les peines d'emprisonnement et d'amende pourront être réduites à celles de police."

into and within the several areas of jurisdiction. These Orders, however, exhibit many varieties of detail. By some all movement is stopped, even from one part of a farm to another if a public road intervenes. Movement on farms is permitted by others, sometimes with permission granted by a justice or justices, provided the extent of highway traversed do not exceed a space varying from 100 to 440 yards, whilst occasionally the freedom of the farm from disease for a given but not uniform period must be proved before the highway is crossed at all. In most counties cattle may be moved for slaughter or for breeding purposes under licence, which may be granted, in some by one justice, in others by two; but in the nature of the declaration on which the licence is founded, the signatures by which that declaration is to be attested, the time for which the licence is to hold good, the facts to be proved, there is remarkable diversity. The animal must have been on the farm, generally speaking, for a period varying from 14 to 30 days; the farm must have been free from disease for a period varying from 14 days to two months; and in some cases no disease must have occurred within a certain distance, varying from a quarter of a mile to five miles, of the farm itself or of the route to be travelled. In one or two instances it is further required that the beast should not have been brought into contact with newly purchased stock, or exposed in a market within a given period. In the majority, all removals between sunset and sunrise are forbidden. Some Orders include cattle, sheep, and swine; some cattle and sheep; some horned cattle only. These examples by no means exhaust all the diversities discoverable in this mass of local regulations—diversities doubtless justified here and there by the varying circumstances of different counties, but evidently arising in a very great measure from mere want of concert, and probably destined, if they are maintained, to beget considerable dissatisfaction and inconvenience.

IV.

In our First Report we humbly submitted to Your Majesty the conclusions at which we had arrived respecting the general character of the disease, and the measures which should be adopted with a view to arrest its progress. We agreed (Mr. M'Clean dissenting) in the opinion that the only reasonable hope of effecting this object lay in imposing, for a limited period, restrictions of a very stringent kind on the movement of cattle, and that these restrictions should be uniform, and should be carried into effect at a time when the disease had not spread to an unmanageable extent, and when they would be attended with fewer difficulties and with far less of loss and inconvenience than must necessarily surround them towards the approach of spring. We differed in some degree as to the amount of stringency which we might reasonably venture to recommend. We think it right to say (Mr. M'Clean still dissenting) that the opinions in which we then concurred not only remain unshaken, but have been materially strengthened and confirmed by the deplorable experience of the last three months.

After laying before Your Majesty our Recommendations on this head, it remained for us to pursue the investigation which we had already begun into the nature of the disease, with a view to ascertain how far it could be combated by curative or preventive treatment. This investigation included a thorough and minute observation of the symptoms and progress of the disorder and careful inquiries into its general and chemical pathology and morbid anatomy, a microscopical examination of the tissues and fluids of the bodies of diseased animals, a trial of various methods of treatment, experiments on disinfection and ventilation. It was further desirable to ascertain by actual experiments to what other animals it was communicable.

These inquiries were committed, under the general superintendence of the medical and scientific members of the Commission, to the following gentlemen :—

1. Nature, Propagation, Progress, and Symptoms of the Disease; J. B. Sanderson, Esq., M.D.
2. General Pathology of the Disease, and its Relation to Human Diseases; C. Murchison, Esq., M.D.
3. Chemical Pathology of the Disease; W. Marcet, Esq., M.D.
4. Morbid Anatomy of the Disease; J. S. Bristowe, Esq., M.D.
5. Microscopical Researches on the Disease; Lionel S. Beale, Esq., M.D.
6. Treatment of the Disease; George Varnell, Esq., M.R.C.V.S., and William Pritchard, Esq., M.R.C.V.S.
7. Disinfection and Ventilation; R. Angus Smith, Esq., Ph. D.

On several of these heads no definite conclusions could be formed without long and laborious inquiry. On most of them we have already received Reports, and all the Reports will very soon be completed. We shall then lose no time in laying them before

Your Majesty, together with a brief general account of the results reached by the different lines of investigation. This will form our Third and last Report.

An experimental investigation of the nature and treatment of the disease was commenced at an early period by several gentlemen of high professional and scientific eminence at Edinburgh, and a valuable Report by them has been already published. These gentlemen are continuing their researches, and have undertaken to place in our hands a further report upon the subject.

A large mass of statistical information respecting the progress of the disease has been collected by the Veterinary Department of the Privy Council Office; and the Department has also obtained, by printed forms very extensively circulated, information respecting the various modes of treatment which have been practised in different parts of the country, and their respective results. A comprehensive digest of the information so procured under both heads is being prepared under the direction of the Secretary of the Department, and we hope to be enabled to append this digest, with some illustrative maps, to our Third Report.

Some further evidence, oral and documentary, respecting the progress of the disease, the condition and inspection of cow-sheds and slaughter-houses in the metropolis, the precautions enforced and accommodation provided at the various landing-places for foreign cattle, and the provision made for the proper transport of live stock on the railways of the United Kingdom, is appended to this Report.

V.

We shall abstain in our present Report from entering into the results of the scientific inquiries to which we have referred. There are, however, some points of more or less practical moment, to which in closing our inquiry we think it right to advert.

All endeavours to discover a method of treatment on which some reliance could be placed have entirely failed. Innumerable suggestions of this kind have been made or communicated to us, to none of which any substantial value could be assigned, and the knowledge and ingenuity of practitioners in every part of the United Kingdom have been exerted for this object in vain. The experience of the Dutch physicians and veterinary surgeons during the present outbreak appears unhappily to coincide on this point with our own.

Vaccination is not a protection against Cattle Plague. Careful experiments, conducted at our desire by the most experienced operators, have shewn that an animal successfully vaccinated, and in which cow-pox has been fully developed, may, within a few days after exposure to the infection of Cattle Plague, contract that disease and die of it. We have at present no evidence that vaccination fortifies the system against this new assailant in any degree. The experiment, however, is now being made on so great a scale (upwards of 27,000 having been vaccinated in Cheshire alone), and under such a variety of circumstances, that, should this statement require any material qualification, the public will soon have full information on the subject.

The possibility of mitigating the virulence of the disease by inoculation with the matter of the disease is a subject of much interest, and has engaged our attention. Such inoculation has been tried repeatedly, and on a considerable scale, by the Russian Government, and the effect of a long series of transmissions has been carefully noted and recorded; but the experiment has not been very successful, and it has for the present been abandoned. The Dutch Government, though much pressed to introduce it in South Holland, has refrained from doing so for fear of the consequences. (*Rapport aan den Koning*, 23d Jan. 1866.) Whether modes of inoculation may not yet be found which will effect the desired object is a question which can only be solved by various and repeated trials. Further information on the subject will be given in our Third Report. It is obviously unadvisable that any experiments of this kind should be tried, unless by persons of competent scientific knowledge, and under the strictest precautions to prevent the spread of infection.

The only means of combating the disease which remain consist in the stoppage of the movement of stock and of things likely to be vehicles of infection, in the isolation and slaughter of infected cattle, and in the use of disinfectants.

The careful and thorough use of disinfectants, which attack and neutralise the poison either when floating in the air or when adhering to solid or liquid substances, cannot be urged too strongly. In every locality measures should be taken to circulate information as to the best disinfectants, and to ensure their being used. Some ready and effectual compounds for disinfecting the air, for cow-houses, waggons, ships, and moveable articles,

especially of metal, and for fresh hides, horns, and hoofs, are described in a note ;* but we hope to supply more detailed information on this subject in our Third Report.

But it is still necessary, and it will not cease to be necessary, to insist on the measures on which so much stress has already been laid—and of the importance of which the country is now fully aware—on the restriction of movement, and on isolation. Recent experience appears to indicate further the expediency of slaughtering infected cattle, provided this can be done without injustice to the owners. By what means this can be best accomplished,—whether by voluntary associations, such as that in Aberdeenshire, or otherwise,—what may wisely be done by the Legislature or the Executive to promote and encourage such associations, or to assist in other ways the desired object, are questions on which this Commission possesses no special information, and which will soon no doubt be discussed in Parliament.

We have one thing to add. The subtle poison of this disease has now diffused itself through the country, and our principal danger is at home, and not in importations from abroad. But the question, what permanent regulations must be made to prevent the re-importation of it hereafter from infected countries, is one which must be considered sooner or later.

The importation of foreign cattle is large, and largely increasing. It is found profitable to bring them from countries where this disease is a frequent guest, and in the near neighbourhood of which it commonly dwells. Hungarian bullocks fetch in the English market a price sufficient to repay the importer. The time required for transit is not well ascertained, nor is it very important to ascertain it, for it is always liable to be shortened by improved arrangements ; and an animal which has travelled in a drove, truck, or ship-load, may well be diseased on its arrival here without having been so when it started on its journey. As to the countries from which cattle come, there can often be no certain knowledge ; they are sent, for the most part, to England by foreign dealers resident in German towns, are consigned to salesmen here, and sold on commission. Hamburg and Rotterdam, from which the chief importations come, are the terminal stations of the great network of German lines, branches of which run into Hungary, Poland, and Gallicia, and will soon be pushed up to the Bessarabian frontier. The Dutch ports alone have sent us not less than 150,000 cattle and 250,000 sheep in a year. Cattle which have stood in the markets of Magdeburg or Berlin have undoubtedly undergone inspection, and, if brought from an infected district, quarantine. But we think it useless to trust to any inspection or other precautionary measures which foreign Governments may be induced to apply to cattle leaving their own ports or frontiers, or in the case of through traffic. Such precautions may be desirable, but no real reliance can be placed on them. We must be prepared to meet the danger when it reaches our own shores. We receive, during several months in the year, from 5,000 to 10,000 animals a week, which are landed at a few ports, and thence dispersed all over the country. More than half of the entire number land at London ; upwards of six-sevenths at the three ports of London, Harwich, and Hull. Against the peril which must lurk in these great importations mere inspection will always be a very imperfect defence, even if conducted with greater local facilities and under more careful supervision than seems to have been the case hitherto. There is in fact but one class of precautions likely to be effectual—viz., to restrict importation absolutely, except in case of stress of weather, to a certain number of ports, where proper accommodation could be provided ; to cause all fat cattle to be slaughtered at the ports, and all store cattle to undergo a period of quarantine. Hides and skins from any part of the Continent, not dried as well as salted, ought to be disinfected at the port of importation.

The evidence which we have received on some other points on slaughter-houses and cowsheds in the Metropolitan District, on the substitution of dead meat markets for live cattle markets, on the inland conveyance of cattle by railway, and on the cleansing and regulation of sea-going cattle boats—we lay before Your Majesty, without founding any recommendation on them. The present calamity has shown how defective are our

* The experiments of Dr. Angus Smith shew that the best disinfectants are carbolic acid (or M'Dougall's powder) and chloride of lime. Both of these should be freely used in all sheds, and for waggons and trucks, not only in infected districts, but throughout the country; the walls, floors, and roofs being all well washed. Some of the carbolic acid passes into the air, which it purifies. Hides should have common salt spread vero them for twelve hours, and afterwards be washed in a solution of carbolic acid and water (two ounces of acid to the gallon), or be laid in a solution of chloride of lime ($\frac{1}{2}$ lb. to a gallon of water) for ten minutes. Manure should be burnt, or, if this be impracticable, should be disinfected with carbolic acid, and deeply buried. For washing purposes, Dr. Angus Smith recommends M'Dougall's disinfecting soap, which contains crude carbolic acid.

general precautions—if any precautions can be said to exist—for the detection and prevention of contagious cattle diseases, and we trust that it will give an impulse to improvement in these respects, and that the subject will be reconsidered hereafter. It lies, however, beyond the scope of our Commission, and we content ourselves with directing attention to it.

(Signed) SPENCER.
CRANBORNE.
ROBERT LOWE.
LYON PLAYFAIR.
CLARE SEWELL READ.
HENRY BENCE JONES.
RICHARD QUAIN.
E. A. PARKES.
(Subject to views appended to First Report.) J. R. M'CLEAN.
THOS. WORMALD.
ROBERT CEELY.
CHARLES SPOONER.

5th February 1866.

MOUNTAGUE BERNARD.

MINUTES OF EVIDENCE.

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MINUTES OF EVIDENCE

TAKEN BEFORE

THE CATTLE PLAGUE COMMISSIONERS.

Tuesday, 28th November 1865.

PRESENT:

Earl Spencer.	Dr. Parkes.
Viscount Cranborne.	Mr. Wormald.
Mr. Read.	Mr. Ceely.
Dr. Bence Jones.	Professor Spooner.
Dr. Quain.	

EARL SPENCER IN THE CHAIR.

Colonel The Honorable Wellington Patrick Chetwynd Talbot examined.

Col. The Hon. W. P. C. Talbot.

28 Nov. 1865.

4294. (*Chairman.*) I believe you have a farm near London?—Yes; within six miles of the Marble Arch.

4295. Do you keep a considerable number of dairy cows there?—I have 100 cows milking now, I believe.

4296. Have you up to the present time suffered from the Cattle Plague?—No,; I have not suffered from it. I have had no cases at all.

4297. What precautions have you taken to avoid it?—Perhaps I had better state at once, without troubling your lordship to question me, all the precautions I have taken; probably that would be the shortest way of laying the facts before the Commission. In the first place I employ a cattle dealer to buy cows for me, with instructions that he is to buy them at the farmhouses, where he believes that there is no infection as far as he can find out. He then puts them on to the railways at small stations where there is no great congregation of cows. He disinfects the trucks himself (at least he tells me that he does so), with chloride of lime, and so forth. The moment they arrive on my farm, all the cows are disinfected with Burnett's disinfecting fluid; they are washed thoroughly all over with it, and they are kept in successive lots. I desire him to buy eight or ten at a time, so that I can keep then separate. They are then put into a field by themselves, and one field is left between each lot of cows empty. When they have been there three weeks, we will say, they move on in succession. I then have a separate shed for them rather more than a quarter of a mile from the main building, and when they have calved they go into this shed, where they are attended to by a man who has no access whatever to the main building. He lives in the village, and comes and attends to these cows, and nothing else. After being there they are again disinfected before they are allowed to come up to the main shed; they do not come up to the main shed until they have been there for eight or ten days. As soon as those cows have been separated they get an ounce of nitre dissolved in a pint of cold water every other morning, and half a pint of prepared charcoal is given between two cows every morning. Their noses are washed with vinegar and water mixed in about the proportion of half and half. I am speaking now of the cows that are in quarantine. Burnett's disinfecting fluid is used freely throughout the whole of the sheds with a watering pot, and a man goes all round the sheds, and waters in front of the cows' noses where they breathe. All the drains are carefully washed with this Burnett's disinfecting fluid every day. In addition to that I hang a lot of cloths or rugs or sacks about the beams of the building saturated with this Burnett's fluid; and I also limewash the sheds every month with a mixture containing this fluid, so that it keeps the smell off altogether. No stranger or butcher is on any pretence whatever admitted into my sheds. My men were ordered not to mix with the cow men belonging to other people when the disease was close to me; and when the cows of a neighbouring cowkeeper to me were suffering from it, I begged these men to go to another public house on the other side, which I believe they did. I attend to the ventilation as well as I can. I keep the sheds as open as possible, and I remove the manure from around the sheds as often as I can possibly do so, so as to have no accumulation of manure about them. I think that is pretty nearly the whole of the precautions which I have taken.

4298. Have your neighbours suffered very much from the Cattle Plague?—Yes; several of my neighbours have lost all their cows within a very short distance of my sheds.

4299. (*Mr. Read.*) How near to you?—I should think the nearest shed is perhaps half a mile, but there have been cows within 300 or 400 yards of my cows which have since died in the fields.

4300. (*Chairman.*) Do you know any of your neighbours who have followed out the same precautions as yourself with equal success?—No; I do not know that they have followed them out at all. I do not know whether it is worth while for me to relate a circumstance which I am acquainted with, about a cow going to a bull; but as it is a curious thing, you may be interested in hearing it. Some short time ago, I suppose it is now two months ago, although it only came to my knowledge the other day, a neighbour of mine sent a cow to a bull belonging to a cowkeeper who had the plague amongst his cows. When my neighbour got the cow home he found out that the Plague was amongst those cows, and he came up to the bailiff in great distress, and said he heard that my measures seemed to be efficacious, and he wished to know what I was doing. My bailiff told him what I was doing; he administered

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the charcoal and nitre, and so forth. The bull to which the cow had been died three days after bulling her, but the cow is still alive, at least it was alive a week ago; it never took the disease at all; it remained perfectly well.

4301. (*Mr. Wormald.*) How long ago was that?—I cannot tell the exact date; I heard it a week or ten days ago, but I think it had happened some time previously. It accidentally came out in conversation with my bailiff; he did not tell me of it at the time.

4302. (*Chairman.*) What is your view as to the origin of the Rinderpest?—If I am to give an opinion at all, I believe myself that the disease is an epidemic, but after having once come into the country it is highly contagious and infectious. I believe that to be the case everywhere. I do not attribute the origin of it to infection in the first instance.

4303. Do you believe that it could have broken out in the London dairies in the first instance?—I think there is a great misconception about the London dairies. I think people are apt to accuse the London dairies of being much more unhealthy than they really are, because I have heard of dairies kept really in the worst way, which nevertheless have been free from diseases before this Plague came; I mean as free as any other place. I do not believe that the London dairies are the focus of contagion myself. I think that dairy cows fed as we feed them are more liable to disease than any other cows. I believe the feeding them on brewers' grains destroys the constitution of the animal in time, and therefore they become more liable to disease than cows fed in the fields. I believe the drain upon the constitution by feeding cows upon grain is very great. The object of course is to force the milk, but when anything happens to a milking cow, the milk stops all at once; and this sudden stoppage must have a great effect upon the system.

4304. What is the usual custom with regard to renewing the cows in a dairy?—I keep my cows so long as they give me milk enough and make flesh enough to answer my purpose; the moment I think a cow does not pay her way I sell her, whatever her condition may be.

4305. Can you say what is the average time for which you keep a cow?—I should think it is from eight to ten months.

4306. You are constantly, therefore, buying and selling cows?—I am constantly buying and selling; within the last three weeks I have bought between 30 and 40 cows.

4307. I suppose that is the case with almost all cowkeepers?—It must be the case.

4308. In that way, I suppose, if there is any disease in a market, cowkeepers are more liable to it than breeders of stock?—Certainly. I think that is the case, because they must communicate more with other cattle.

4309. That would be one reason why this disease has made much greater havoc in the metropolitan dairies than elsewhere?—Certainly; and it is a serious risk now. I feel every time I buy a cow that it is a serious risk.

4310. (*Mr. Wormald.*) What number of fresh cows have you had since this disease first commenced?—I should think I have had 40, probably. At first I was very much alarmed about the disease, and kept my cows as long as I could without buying others; but now the time has come when they have got very fat, and give no milk, and I must change them, or give up the business altogether. At first I abstained from buying as long as I possibly could; but then I made up my mind that I must either give up the thing altogether or buy some more.

4311. Do you do anything specially to disinfect the manure?—No. I do nothing of that sort. I should do so if any cattle had the Plague; in that case I should certainly throw Burnett's disinfecting fluid over it; it is a very useful thing. Burnett's disinfecting fluid destroys all smell. You probably are aware that in the neighbourhood of a cowkeeper's sheds, there is always a smell; you may smell it 200 or 300 yards off; now you could not tell that there was a cow upon my premises; you may walk into the sheds, and you will perceive no smell whatever, though they are very rough premises; they are nothing more than old barns converted into sheds.

4312. There is plenty of ventilation?—Yes; plenty of ventilation, and I made the drainage as good as I could.

4313. (*Chairman.*) Do you consider it advisable for those who wish to avoid the infection that they should not purchase in the open market at present?—Decidedly. I think the weekly markets held in large towns are the most dangerous centres of infection. I might mention, for example, Liverpool, or perhaps I had better take Wolverhampton. I was in Staffordshire yesterday, and I found that the local magistrates there are very shy of interfering under these circumstances. The Wolverhampton market belongs, I believe, to the corporation, who lease the standings in this market to the butchers, and the cattle are brought to the weekly sale there; and they say, "If "we stop the market, the butchers might bring an "action against us for breaking their lease." Therefore, unless the markets are stopped by a central authority, nothing will be done. Those markets are the centres which, having become once infected, are disseminating the infection all over the country.

4314. (*Chairman.*) I suppose that it is particularly the case in London, that when the cowkeepers find their cows falling sick, not knowing perhaps that it is a very dangerous thing, they send them into the market, in order to turn them into capital as soon as possible?—Yes; and I can speak of it as regards my own case. I sent two cows yesterday to the market. I was told that they were beginning to be ill with pleuro-pneumonia. My orders are: "If you find "anything the matter with a cow, do not mess with "her; send her into market." Of course the cowkeepers look at the way in which they can make the most of them. My experience is, that the more you treat these animals the worse they become; they are of no use after they have gone through a process of dosing and physicking.

4315. (*Mr. Wormald.*) They are of very little use even if they do get well?—Exactly; they are mere wrecks.

4316. (*Chairman.*) Is there any difference between the health of cows in London itself and in the suburban parts, such as Willesden and Hendon?—I really do not see that there is. Lord Granville, who has a farm steading out in the country, has lost, as you are aware, all his animals; and Mr. Panter will tell you that he has lost a great many by pleuro-pneumonia from time to time, and he has got the foot-and-mouth disease now.

4317. Is the treatment in the suburban farms the same as that in the London dairies?—Yes.

4318. (*Mr. Read.*) By "treatment" do you mean dietary?—Diet and management.

4319. (*Chairman.*) You do not turn out the cows in the country more than in London?—No; my cows never go out at all, if I can possibly help it.

4320. Have you had any experience of the result of occasionally turning them out as regards the quantity of milk?—Yes. In the year before last we had a very dry season; we usually cut the lattermath grass, and bring it into the sheds to feed the cattle with; but it was so very dry in the autumn of the year before last that we had no grass to cut, and therefore we were obliged to turn the whole herd out. The consequence was, that I lost a very considerable quantity of milk, and also the cows sank very much in flesh. It did not answer at all; we were obliged to do it, or else we never should have done it.

4321. (*Mr. Read.*) At what time of year was that?—In the month of August.

4322. The weather was hot and dry?—Yes; there was no grass to cut, and we could not get any lattermath.

4323. Perhaps there was not very much to eat?—There was not much to eat either.

4324. Could you give any idea of what is the average mortality of your 100 cows?—No, I do not know that I could. I could not answer that question. I never have put it in that way; it is difficult to arrive at the average mortality, especially when you sell them alive, in order to save their dying on your hands.

4325. Have you had many cases of pleuro-pneumonia?—I have had several lately. I have had as many, I should think, as twelve within the last six weeks.

4326. Do your cows get the foot-and-mouth disease?—Yes; they have had the foot-and-mouth disease also, and that is likewise a very serious disease.

4327. Those two would be your principal diseases hitherto?—Yes.

4328. Will you tell us what sort of diet your cows have?—They are fed differently at different times of the year. Supposing I begin at this time of the year, they are fed upon mangel-wurzel, of which they get two feeds in the day; and they have hay and mangel-wurzel tops also. I am now giving them the mangel-wurzel as long as they last, tops and roots together; that produces more milk. And they have hay, and barley and oatmeal mixed, and twice a day they have brewers' grains.

4329. I suppose in summer you substitute grass?—Yes, we give them grass in summer. We begin first of all with vetches; that is the spring feed. I grow a piece of vetches always. When those are consumed I go to the grass. When that has got too old I come upon the clover, then I give them the latter-math grass, and then we begin with the mangel-wurzel tops. We strip the mangel-wurzel leaves in order to give them always some green food.

4330. Is the mangel-wurzel the only root you give them?—Yes.

4331. Do you give them cabbages?—I do give them cabbages if I have them; they are excellent.

4332. How do you give the charcoal?—My man takes a little half-pint measure, and mixes it with the grains. All these dairy cows are fed in pairs. He mixes this charcoal with the grains, and stirs it all up together.

4333. They stand in stalls in pairs?—Yes; they are fed in pairs.

4334. Have you any difficulty in getting them to eat the charcoal?—Not the least. I may mention a curious thing which occurred a little time ago with regard to the charcoal. My bailiff, a most practical man, and who understands the keeping of cows most thoroughly, told me that usually in drenching these dairy cows there is some unpleasant smell coming from the cows' breath. I ordered nitre to be given every other morning, therefore he was drenching 50 or 60 cows every day. He told me that after they had had the charcoal a little time there was not the slightest smell coming from their breath at all; it was perfectly inodorous. He said he thought the charcoal must have a great effect upon it. That was the result of that treatment.

4335. You have stated that you studiously excluded all butchers from your sheds?—Yes; everybody. My orders were to turn away every one, including the inspector, and I said I would fight it out with the Government afterwards, because I consider that the inspector is the most likely man to bring the disease to my premises. I have given strict orders that he is not to be admitted into my premises, unless I have the disease; then I would admit him.

4336. I think you said that when the disease was once in the country you thought it would spread in all directions; do you consider that the disease was brought in, or that it originated in this country?—I believe it to be epidemic in reality, as well as contagious. I believe it to be highly contagious when it is once established.

4337. What sort of cows do you buy principally?—The common short-horn cow, well selected; a good class of animal.

4338. You do not generally keep them above eight or ten months?—No; some few go on longer. I have had them as many as fourteen months; others have gone through in six or seven months.

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4339. Do you buy them in milk or in calf?—In calf whenever I can get them.

4340. After the second or third calf, or what?—As I can get them. It is not very easy to get them at four years old; they are generally too old; but if I had the choice I would rather buy them at four years old.

4341. Do they come from the Midland Counties or from the north?—From the Midland Counties generally; from Buckinghamshire, Worcestershire, and Gloucestershire.

4342. When a dairyman in the country has a big old cow he generally sends her to you?—Yes; a good many come in that way. Of course I try to avoid the old ones as much as I can.

4343. (*Mr. Wormald.*) You said that you preferred cows about four years old; I suppose that would be when they had had the third calf?—Yes; or the second calf. My reason for wishing to have them at that age is that they are much better for the butchers afterwards.

4344. You have two objects in view, to obtain milk from them at the time, and to sell them to the butchers afterwards?—Yes; one object is that I get as much milk as I can, and the other that the animal shall be as fat as possible afterwards, when I sell it. I give them whatever they will eat. I do not care how much they eat; I believe it pays in the additional quantity of flesh when they are sold and in the improved quality of the milk.

4345. Do you mix anything with the mangel-wurzel you have spoken of?—No; I just give it them as it comes out of the field.

4346. Is it pulped?—No; I tried to pulp the mangel-wurzel, but I thought it made the cows scour. I also tried steaming, but I thought it did not answer at all. It does with turnips, perhaps, but not with mangel-wurzel. I think the less you meddle with mangel-wurzel the better. I never cut my mangel-wurzel; I give them whole to the cows, and I think the cows are better upon them in that way. It also saves the expense of cutting, and I think the cows like it better; it is more natural to them.

4347. (*Mr. Read.*) What quantity of mangel-wurzel have they in a day?—I really could not tell you that exactly, but they have a scuttle full; a bushel. Mr. Panter will tell you all that; he is coming directly.

4348. (*Mr. Wormald.*) Are you careful about the condition of the food, to see that it is not in a fermenting state?—The grains are given as we can get them; they are some time in the graining pit, and then they are carefully pressed down; but we often get them from hand to mouth as fast as possible, and then they are fresh.

4349. You prefer having them fresh?—Yes; I prefer them fresh.

4350. (*Chairman.*) I suppose you have a great abundance of grain?—As many as I can use. Unfortunately before this Plague was known or apprehended, I and many others entered into a contract with brewers for grains during the twelvemonth. The consequence is that many cowkeepers have been obliged to throw their grains away; they have been throwing them on their manure heaps. It is not of much importance to me because my contract is out at Christmas.

4351. (*Professor Spooner.*) Then you disapprove of grains as a food for cows?—I do not disapprove of it, because nothing produces so much milk as grains, but I think it is an irritating food, and a forcing food to the animal.

4352. When your contract is out, I presume you will cease to give grains?—Not at all; I should lose enormously in the milk, if I did.

4353. About what quantity of hay do you give per day to your cows?—I could not tell you what the quantity is by weight myself, but Mr. Panter will

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answer those questions much better than I can; he knows exactly. I have known, but I have forgotten again, what the exact weights are.

4354. (*Dr. Bence Jones.*) Do you use bran?—Not except in cases of illness.

4355. (*Chairman.*) Have you any means of comparing the quality of the milk from London dairies, and which is produced by cows managed in the way in which you manage yours, and the milk which comes from the country?—I have no means of comparing them, but I have not the slightest doubt that the milk produced by feeding them on grains is very much poorer than the milk produced in the ordinary way.

4356. It has been suggested by some people that it would be desirable, for the prevention of diseases among cattle, to do away with the London dairies; have you any opinion upon that subject?—I really do not myself think that it is necessary to do away with the London dairies altogether. I think, as I said before, that cows fed under the conditions under which we feed ours are more liable to disease than cows fed in the ordinary way. But it would stop an immense supply of milk, which is a very necessary article in London, if the London dairies were all done away with. The milk supplied from dairies in and round London is much more valuable to the milk dealer than what he gets up by the railway; the dealers all tell me that they like to get it warm into their dairies.

4357. It would be rather the management than the locality which is the cause of the greater mortality among the London cattle, in your opinion?—I think it is the management. I do not think the locality has much to do with it. I think all these sheds ought to be maintained with a proper amount of ventilation, and a certain cubic space allotted to each cow, and a certain degree of cleanliness might also I think, very well be insisted upon. If that was done, I do not see any more reason why a cow should die in London than anywhere else.

4358. (*Mr. Read.*) You think that mangel-wurzel forces the milk to a great extent?—Yes; it makes milk.

4359. And poor milk?—Yes; but you see my object is quantity; I do not care about the quality.

4360. (*Dr. Parkes.*) May I ask what is the strength of the Burnett's disinfecting fluid you use for washing the cows?—I put it into two hundred times its weight of water.

4361. Do you wash them all over the skin?—Yes, all over. For washing the cows themselves, I mix it stronger. I am not sure whether I understood the question rightly.

4362. What strength do you use for washing the cows?—I should put perhaps three wine glasses into a bucket of water; that is about the proportion.

4363. (*Professor Spooner.*) That would be about four ounces?—Yes.

4364. (*Dr. Parkes.*) You stated that the cows were disinfected again a second time?—They are washed over again before they are allowed to go to the main herd.

4365. Have you found any reason to apprehend danger from sprinkling Burnett's disinfecting fluid about in the way you have described?—Not in the least.

4366. You do not think there has been anything like metallic poisoning?—Not in the least.

4367. You spoke of having had the disease close to you; how close was it?—Within half a mile.

4368. Was it very bad?—I believe that a man lost all his cows. Mr. Drury is his name.

4369. What was the distance of the disease from you in the other directions; had you it all round you?—All round, except on one side, I believe, where a Mr. Grey, a clergyman, has the farm next to me. I have not heard of his having had it.

4370. He has escaped equally with you?—I think he has.

4371. Did he adopt the same precautions as yourself?—He could not have done so; his cows are not fed under the same conditions; they are out in the fields. What rather weakens my belief in my remedies being of any great use is that I have not had the diseaase among the cows in the field, to whom I have not given the charcoal.

4372. Can you state what number of cows you have had in the field compared to the number in the sheds?—I should think there are 90 in the sheds, and 20 out now; but the number varies very much.

4373. The 20 have not been in strict quarantine as the others have?—They have all been disinfected, as I term it; then they were turned out into the fields. That is all that has been done. I can do no more to them than that. I may state, however, that no man goes among those cows except my bailiff; he goes among them occasionally, but he does not touch them; and he takes care to have a different man to look after the cows in the field from the men who attend to the cows in the shed.

4374. Upon what evidence did you institute such a system of isolation as you have described?—I did it out of my own head, the moment I had heard that such a plague had appeared.

4375. You did not adopt that system in consequence of any evidence in your neighbourhood of its having succeeded, but you did it in consequence of your own belief that it would succeed?—I did it from my own idea of what was the best thing to do, as any farmer would. I had been very much alarmed.

4376. (*Mr. Read.*) You stated that the disease was close to you; how close was it?—It was half a mile off, or thereabouts, in a neighbouring cowkeeper's shed.

4377. That is half a mile from your shed?—Yes; I should think it would be half a mile as the crow flies.

4378. And 300 yards from the cows in the field?—Yes; 300 yards from the cows in the field. It weakens my belief in the efficacy of the measures which I took, that the cows in the field have not had the disease; that is what I do not understand.

4379. Still you have taken great pains with the cows in the field?—Every possible pains. I may add that the farm is particularly well situated; there are no roads at all. I have some fields that abut upon a high road, but I have never put a cow into them.

4380. (*Mr. Wormald.*) Have you no footpaths?—I have not put a cow into a field adjoining either a high road or a footpath.

4381. (*Mr. Read.*) You have no hunting there?—No, no hunting. Before the Plague began I let the latter-math to a shepherd, according to the custom in our part of the world; he brings his sheep and eats the latter-math off. He used at one time to bring a dog with him, but I have ordered him never to bring the dog without tying him up. I should not like to have him running about.

4382. (*Mr. Ceely.*) Unless you have recently drained the land, there is a great deal of it very badly drained?—I have drained it nearly all.

4383. (*Dr. Parkes.*) Can you give us any idea of the number of cows attacked in your neighbourhood and those not attacked?—I have not the slightest idea, but I know that most of the cowkeepers in the neighbourhood have lost them all, or pretty nearly all.

4384. (*Chairman.*) You rely principally upon isolation rather than medical helps and disinfectants?—I rely entirely upon isolation. As far as my opinion goes, I believe that there is no cure for the disease but to knock the cows on the head when they have got it; that is my private belief.

4385. (*Dr. Quain.*) With regard to the period of the year in which the disease was so near you, was it in summer time, when the flies were about, for it has been said that the flies might propagate the disease?—It was about six weeks ago.

4386. That would be about the middle of October?—Yes.

4387. Comparing a cow establishment in London

and one at Willesden, for example, with regard to the facilities for getting fodder and water for the cows in the two places respectively, and for getting rid of the discharge of urine and filth, is there a greater facility in the one case than in the other ?—I do not see why a London cowshed should not be just as well kept as a country one. The London cowkeepers bring up their food in the same way for their cows as I do for mine.

4388. Have you an abundant supply of water ?—I have not ; but it may be worth while to add that the water which my cows drink is entirely rain water. I have no spring water about the place ; all that they drink comes from the heavens. I have heard people say that the disease may be carried in the water ; my water is quite free from that danger.

4389. Do you think that there are greater facilities for supplying water to cattle in London or in the country ?—I should certainly say that you could get it more easily than on my farm.

4390. With regard to food, the facilities would be about the same ?—Yes ; but we have it nearer.

4391. With regard to getting rid of the excretions of say 300 or 400 head of cattle, what is done with it in the country ?—Mine runs away and is discharged out of the main buildings in earthenware pipes. I have a cistern for it. I meant to use it over the land, but practically I found that that was not done, and it all flows away down the ditch.

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4392. Have you heard that complained of ?—Not at all.

4393. Are there houses near ?—No.

4394. Is it possible that it may become a nuisance if you do not make use of disinfectants ?—Not at all. Of course the ditch always smells, more or less, but it only goes down to the high road ; the discharged matter flows along the ditch across the high road under a culvert. Of course there are cases where the discharged matter might become offensive.

4395. Would there be opportunities for getting rid of it in London ?—Yes ; almost easier than in the country.

4396. Is it the case, as far as you know, that the cowhouses in London are mixed in the same blocks of buildings with other houses, and are in that way offensive and injurious to the inhabitants of London ?—I do not see why that should be if care is taken to remove the manure, and if the liquid manure is properly taken away. On the contrary, I have always heard that the smell of cows is very healthy ; but I am only speaking as a private individual, and not in the least as knowing anything about it.

The witness withdrew.

Mr. CHARLES PANTER examined.

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4397. (*Chairman.*) You are bailiff, I believe, to Lord Granville ?—Yes.

4398. Lord Granville has a considerable dairy farm at Hendon ?—Yes.

4399. What number of cows has he got ?—His lordship originally kept 130.

4400. Has Lord Granville suffered from the Cattle Plague ?—Yes.

4401. Will you just state the particulars of the outbreak at Lord Granville's farm ?—I will read the statement from a letter to the "Times" which Lord Granville published. It contains the particulars as I related them in a letter to his lordship. "On the "13th of July last I purchased five Dutch cows in "the Metropolitan Market, and placed them in quarantine at Childs Hill Farm, one mile from here." (That is Golders Green Farm.) "On the 22d of July "one of them showed signs of debility. Diarrhœa "followed. Thinking it was only a cold, she was "treated accordingly, but continued to get worse, "and died in five days. Two more were attacked "in a similar way, when veterinary advice was "called in, but in five days the whole either died or "were slaughtered. Every precaution was used to "prevent the spread of the infection here. The "men who attended the sick cattle were not allowed "to go among the healthy ones, and vice versâ. But "previous to this, hearing of the disease in the "London cowsheds, I adopted precautionary measures, "such as a liberal use daily of chloride of lime, administered in the proportion of one ounce of nitre in "half a pint of water to each cow, and a small "quantity of tar, and painted their noses with tar. "But on the 8th of August, unfortunately, the "disease showed itself here" (that is at Golders Green) "in a fat cow that had been for 10 months "in the best built, best drained and ventilated shed. "No new stock had been added for nine weeks. In "a few hours four more cows showed symptoms of "it. I immediately had them all removed and "slaughtered, and made a post-mortem examination "of them, and found the windpipes in a state of "decomposition, the lungs inflated, the small intestines red and inflamed, and the meat of a dark "yellow colour outside and a dark red inside, which "I think unfit for human food after the first stage." That was what I told his lordship in the letter I addressed to him.

4402. How many cows has Lord Granville lost altogether ?—Out of the 130 original stock only seven remain.

4403. You stated, I think, that you had not purchased in the Metropolitan Market or elsewhere for some time previous to the outbreak of the disease ?—No ; except the first five I named, which were placed in quarantine a mile away.

4404. Did they die in the place where they were in quarantine ?—Yes. I had Professor Simonds and Professor Brown down to visit them.

4405. Have you been able to trace the cause of the other animals catching the disease ?—Not in the least ; I cannot possibly trace it.

4406. How far off was the nearest case of Cattle Plague to Lord Granville's farm ?—The nearest case was about 400 yards.

4407. Was it about 400 yards from the fields on Lord Granville's farm or from the cowsheds ?—From the cowsheds where the cows were tied up.

4408. When was the last case of the Cattle Plague at the neighbouring sheds ?—The cows lay in the field; it was not in the shed ; it was in the field in which they lay at Childs Hill that it occurred. The last case previous to the outbreak at Lord Granville's farm was about three weeks.

4409. Were you in the habit of letting out any part of the farm to salesmen or butchers who brought animals there which were intended for the Metropolitan Market ?—I let 40 acres this year to a Buckinghamshire salesman.

4410. What was his name ?—Missenden.

4411. Was he in the habit of putting animals there after they had been in the market ?—Yes ; sheep and cattle too.

4412. Was the field at all near the cowsheds ?—No ; it was rather more than half a mile off.

4413. Did you ever observe any infected or diseased animals among those belonging to that salesman ?—Not one ; neither a sheep nor a beast.

4414. Have you purchased any cows lately ?—Yes ; I purchased 12 on the 16th of August ; that was while we had the disease raging at Golders Green. I placed them at Childs Hill Farm, a mile away.

4415. Did those cows suffer from the disease ?—They continued perfectly healthy for six weeks; then two of them showed some signs of illness, and I had them slaughtered, but the rest remained perfectly healthy.

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4416. Have you any disease upon your farm now?—No.

4417. How long ago is it since the last case occurred?—Nine weeks ago; that was only a suspicious case; but I had the animal slaughtered.

4418. What is your opinion as to the origin of this Cattle Plague in England?—My opinion is that there has never been any proof that it has been imported. My opinion is that it was generated in the London cowsheds during the hot weather of June. I never could see any conclusive proof of its having been imported.

4419. Do you consider it a different disease from any that has been in England before?—I do. I think it is quite different.

4420. How then would you account for the fact that it has been absent from England say for a 100 years?—I cannot account for it, except in this way, that this season the temperature has been much higher, as I think it is acknowledged, than we have had it for many years. I cannot account for the appearance of the disease otherwise.

4421. Do you consider that the state of the London dairies themselves is such as to encourage the propagation of disease?—Not in general.

4422. Do you consider that they are well managed and kept clean, and well ventilated and drained?—I should think 40 or 50 per cent. of them are. There are exceptions which are grossly mismanaged.

4423. What is the usual mode of treating a cowshed in London with regard to replenishing the stock?—The usual mode is, that as soon as a cow gets down to about five quarts of milk a day, the dairyman looks at her, and considers what she is worth the most for; and, as they do not usually breed in London, she is sent to the butcher generally when the quantity of milk gets down to five quarts a day.

4424. There is therefore a constant change going on among the cows?—Yes; cows are replaced twice and three times in the year. A person who keeps 50 cows would have to buy quite 100 usually in the year.

4425. What is the average time that a cow remains in a London dairy?—Not more than six months; hardly that.

4426. And the moment she gets down to this low supply of milk she is sent into the market to be sold to the butchers?—Yes; very often the pleuro-pneumonia takes them off long before that. The London dairies are never free from the pleuro-pneumonia for many weeks together.

4427. How do you account for the London dairies suffering more from pleuro-pneumonia than the country dairies?—I think it is the result of the unnatural feeding. It comes from the artificial and heavy feeding upon brewers' grains in a great measure, that system being resorted to for forcing the milk to the greatest extent.

4428. Do you consider that the constant purchasing of animals in the market introduces infection to a great extent?—I have no doubt about it.

4429. What is the usual mode of feeding the animals in the London dairies? What do you feed them with?—With brewers' grains in summer and winter too. We give them about a bushel and a quarter, or from that to a bushel and a half to each cow, and about 15 lbs. of hay, and about 30 lbs. of mangel-wurzel, and 4 lbs. of meal in addition to that feed in the winter. In the summer, grass instead of hay and mangel-wurzel.

4430. (*Professor Spooner.*) Of what meal?—Barley and pea meal. Pea meal principally.

4431. (*Chairman.*) If this mode of feeding damages the constitution of a cow in a London dairy, why is it pursued?—It is in order to force the greatest quantity of milk which the dairyman can get.

4432. Does not it involve a loss on the part of the dairyman?—Undoubtedly in one respect, but the gain more than covers all the loss; at least it is supposed so.

4433. Do you manage your cows in a suburban district like Hendon in exactly the same way as they would be managed in London?—Not exactly. We give them more air, and feed them more on grass in the fields. We do not feed them so heavily upon grains and artificial food as they do in London. We give them much more natural food.

4434. Do you turn them out to graze upon your farm?—We have done so a good deal; we turn them out from about July to October.

4435. Is that the practice among cowkeepers in districts like Willesden and Hendon?—Some follow that practice, and some do not. The cows always lose condition by being turned out; that is invariably the case.

4436. (*Mr. Read.*) Do they lose milk?—Yes; they lose milk too to the extent of a quart a day, unless the pasture is very good indeed.

4437. (*Chairman.*) It has been suggested by some writers in the papers and elsewhere that it would be desirable to do away with the dairies in London; what is your opinion upon that point? Would it be a desirable thing for the health of the cattle?—Certainly the London atmosphere cannot be a very wholesome one for the cattle to breathe; in a great many parts of London at any rate.

4438. Could the trade be carried on without having the dairies in London itself?—I think so. The deficiency of milk is wonderfully kept up now by what comes from the country. Milk is brought by train, and London seems to suffer very little as regards the quantity of milk since the Cattle Plague has been in existence.

4439. Do you consider that the milk you have at Hendon is better than the milk that is produced actually in the cowsheds in London?—I do.

4440. What is the practice in a cowshed in London, when a dairyman finds that some of his animals have fallen sick with any disease?—The usual practice is to send them direct to the market to be slaughtered for what they are worth, if the cowkeepers are once satisfied that it is the pleuro-pneumonia. If it is the foot-and-mouth complaint they would keep them to go through it.

4441. If they were not prevented by law I suppose they would be anxious to do that also in the case of the Cattle Plague?—Yes.

4442. I suppose that a great many animals with incipient Cattle Plague upon them have been sent out to the markets in those ways?—Yes; hundreds and thousands. I have witnessed them myself in the Metropolitan Market with the Plague upon them; some in its first stages, and some in the more advanced stages.

4443. That would be a ready means of communicating the disease, I suppose?—It would.

4444. If the animal is too much diseased to pass the inspector in the market, what becomes of it then?—The inspector condemns it, and it is sent to the slaughterhouse; there it is slaughtered, and the meat inspector then inspects it, and if it is considered unfit for human food it is condemned, and sent to the knackers. If it is considered fit for human food, it is passed, and goes to Newgate.

4445. (*Mr. Ceely.*) I think I understood you to say that in the London dairies they get a larger quantity of milk, but the quality is not so good as that obtained in the rural districts?—Yes.

4446. In what respect is the quality different?—I think the difference is on account of the extra feeding. The quantity of the milk is forced by grains and mangel-wurzel, and distillers' wash, to such an extent in London that the milk becomes much thinner.

4447. You do not think that there is more cream in the milk produced in the London dairies than in what comes from the country?—The only reason why the milk-sellers sometimes say that there is more cream in the London milk is, because it is set for cream much earlier than it can be when it has to travel. When milk comes up from the country there is the friction of travelling, and it gets cold.

4448. Is it your opinion that the milk coming from

the country, from Aylesbury, for instance, is better in quality than what is produced in the London dairies? —Yes; no doubt what comes from Aylesbury and Swindon at present is much better than what the Londoners ever had before.

4449. (*Chairman.*) Could the milk be carried in that way in summer?—There would be some difficulty in keeping it sweet unless the trains were put on differently to what they are now. If the railway companies would accommodate the farmers it could be done.

4450. (*Mr. Ceely.*) What is the average quantity of milk that a good cow is supposed to yield? How many quarts per day?—It varies according to the different stages after calving. I can state the average of Lord Granville's 130 cows. We consider that about 11 quarts is a good average; that would be partly for cows in milk six months, and some three months, and some one month. Our best cows average from 18 to 20 quarts a day, and now and then they come up to 25 quarts, but that is quite an exception.

4451. (*Dr. Parkes.*) Had any of the 130 cows been turned out at all before the time when they were taken ill. I think they were taken ill on the 8th of August?—They had not been turned out before then, but as soon as the Plague attacked them they were turned into a large open space where there was plenty of good grass and water.

4452. They had not therefore been at all near the fields where Mr. Missenden's cattle were?—No; they were kept closely tied up, and supplied with the West Middlesex water from the Thames, brought down in pipes for a distance of five or six miles.

4453. With regard to the ventilation in the best shed, what space do you give to each cow in that shed?—Dr. Lankester came down and measured it recently. I think he said it was 1,200 cubic feet to each cow.

4454. That is the largest space that you give?—Yes.

4455. What means of ventilation have you?—We have ventilation along the roof, and at each end. There are four windows, not opposite to each other, but placed across in a triangular manner. It is a shed about 100 feet long, with six double doors. We always leave the top door open when the state of the atmosphere will allow of it.

4456. Then the air in the shed is comparatively pure?—Yes; it is open to the field, and it is on high ground.

4457. Does the air seem pure to the senses when you go in. Does it strike you as pure?—Yes; generally. The cows stand head to head, with a four-foot pathway between them. The breath of the cows strikes you as being hot in walking down; otherwise, except when the weather is extremely hot, there is a very nice air in warm weather.

4458. Is the ridge ventilation continued right along?—Yes; one ridge tile is raised above the others in this way (*describing the same*).

4459. That was the shed where the first cow was attacked?—Yes.

4460. That being your best ventilated shed?—Yes; it holds 50 cows.

4461. I suppose a man going into that shed had in reality been near to the Dutch cows that had been ill, had he not?—Certainly not. I, myself, did not go near the place on the same day and with the same clothes. The Dutch cows were a mile away.

4462. You took the greatest trouble to avoid any infection?—The greatest possible pains.

4463. Could you imagine any kind of connexion which might have taken place between those cows and those in your shed?—I believe there was none at all.

4464. You examined into all the circumstances of the case?—Yes, every one.

4465. (*Mr. Read.*) I think you said that in your opinion the disease originated in the London cow-houses?—Yes, I think so, from the fact that I cannot see it proved that it was imported. I have attended the Cattle Market continually, and the foreign cattle have been the most healthy during the worst part of our disease in the months of July and August, which were the worst in London.

4466. Are you aware at what time the disease broke out?—Yes.

4467. Are you aware of the time when the first cases occurred?—Yes.

4468. When was it?—In June.

4469. Was there anything particularly hot or otherwise remarkable in the month of June this year?—I believe so, most particularly.

4470. In the month of June?—Yes; it was remarkable for the heat; it was both a very dry month and a very hot month. I was reading the register of it only this morning in the "Mark Lane Express."

4471. Do you suppose that this was a spontaneous outbreak in your own shed?—I believe it was; I have been nine weeks occupied with it, and have had very great anxiety and trouble during those nine weeks, and I never could arrive at any other conclusion. That is the case not only with myself but with our neighbours as well.

4472. It could have had nothing to do with the ventilation, because the shed in which the outbreak took place was the best one that you had?—I believe the shed is perfect as far as it could be made so, and we had been using disinfectants, such as chloride of lime, ever since I had first heard of the disease in London. We have always used quicklime to absorb the moisture and ammonia.

4473. You think that notwithstanding this good treatment and efficient ventilation the disease broke out spontaneously?—I cannot possibly think otherwise.

4474. (*Mr. Wormald.*) When Professor Brown and Professor Simonds visited the cows that were sick did they inspect also those that were sound?—No; Professor Simonds and Professor Brown came to Golders Green, but they went nowhere near the cowsheds at that time.

4475. They did not go near the sound cows at all?—No; they never returned at all from there to the sound cows.

4476. When you use disinfectants do you apply it to the carcase of the cow itself?—Yes, to the carcase, to the floor, and even to the mangers.

4477. They were washed?—They were not so absolutely washed. They were sprinkled. We wash them now with Burnett's disinfecting fluid, and with Condy's fluid, and with chloride of lime as well.

4478. Since you have washed the cows with Burnett's disinfecting fluid have you had any attacked?—No. That is the new stock that I am speaking of.

4479. How long have you had them?—The 16th of August was the time when we bought the first twelve, but two of those twelve were attacked, not at our Golders Green Farm, but at another farm. Since then there has been no attack at all.

4480. How many have you now?—At the present time there are 54, but part of them are bullocks. I bought them in Shropshire about a month ago.

4481. Have you any belief that those disinfectants have proved of considerable service?—I really have not, because I tried them a long time before this disease broke out in the first instance.

4482. You had tried disinfectants before?—Yes, and the chloride of lime.

4483. Do you know anything about Colonel Talbot's cows?—I have superintended for him ever since he has had a farm.

4484. Are you his bailiff then?—I am not his bailiff, but I am his adviser.

4485. Are you aware that he has used disinfectants?—Yes.

4486. You know all about the treatment in that case?—Yes.

4487. Do you believe that those disinfectants in his

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case have been attended with any beneficial results? —I believe not. The Colonel thinks they have.

4488. To what then do you attribute the immunity in his case?—He is so isolated, and so very much further from town than we are.

4489. Then you attribute the immunity to his isolation?—I think so.

4490. But Colonel Talbot has bought fresh stock continually, has he not?—Yes; but he keeps them in quarantine for three weeks before they can go near the other cows. He puts them in the farthest part of his farm, and lets them lie there for three weeks, and gets them nearer and nearer by degrees to the other cows.

4491. He is perpetually washing them with Burnett's disinfecting fluid, is he not?—Yes, he is constantly using disinfectants. He has been doing so for the last seven weeks. I speak now of the new cows. The others he sprinkles with the fluid the same as I do, and hangs bags dipped in it about the beams of the sheds. His mode of treatment is not different from ours, only he has used rather more Burnett's disinfecting fluid.

4492. (*Dr. Quain.*) Do you believe that this disease originated in London, and in your herd, spontaneously? —I do.

4493. How is it that Colonel Talbot has been exempted from that spontaneous origin?—I cannot tell that. You might say, how is it that one street should be exempt from cholera while others round it are attacked.

4494. You answered a question some time ago by saying that Colonel Talbot enjoyed immunity because he was isolated; you gave that as the reason for his escape?—I attributed it to that, as one reason, but I do not think he is at all safe yet.

4495. You said that he was isolated, and therefore he was safe?—I did not say that he was safe.

4496. Up to the present time he has been safe, has he not?—Yes.

4497. Do you attribute his safety to his isolation? —Yes; partly.

4498. Is there not great inconsistency in attributing a spontaneous origin to the disease in your case, and at the same time saying that his safety is owing to his isolation?—I cannot see it. I believe it is spontaneous in its origin, but most contagious on the same premises. I may mention the case of another cowkeeper who has actually issued circulars to his customers to say that by cleanliness and various other precautions he has kept clear from the Plague, and after having issued those circulars to his customers the Plague broke out among his cows a few days ago. I do not know that that will not be the case with Colonel Talbot's next week.

4499. With regard to the point upon which I was just now asking you; if you had heard that the disease had been carried into a herd, to what would you attribute it?—To contagion.

4500. How could you say that you were quite free from contagion when the outbreak occurred on Lord Granville's farm?—I can only say that to the best of my knowledge and belief we were free from contagion. I believe in contagion. I am bound to do so after what I have heard and experienced. But I may mention that I have four or five neighbours, some within 40 yards, and some within 200 of me, who have escaped the Plague altogether until now, whose cows have been mixed with diseased cows and with infected herds. I have got four instances here. I have made a memorandum of them.

4501. Do I understand you to say that diseased cows have been brought amongst healthy cows, and have not infected them?—Yes.

4502. In what stage of the disease were they; will you make that as clear as possible?—Perhaps I had better refer to my memorandum. The first case that I have put down is that of Mr. Tooley of North Hampstead; he has 20 cows, and they are quite healthy. They have been driven twice a-day nearly a mile up and down a public highway, coming in contact with cattle from the Metropolitan Market, and with diseased cows going to be slaughtered; they have grazed on an open common close to Lord Granville's farm.

4503. That you know for a fact?—That is a fact.

4504. (*Chairman.*) You say that they have met diseased animals; how do you know that they were diseased animals which they met?—I know that they came from an infected shed, and were going to be slaughtered. A neighbour of mine had 105 cows attacked, and he got rid of nearly all before he let the inspector know. I saw them diseased in the Metropolitan Market.

4505. And you know that those particular cows which you have just spoken of met the herd of cattle that escaped?—Yes; just opposite Lord Granville's farm on the Green.

4506. Can you mention another case?—Mr. Sharman of North End, Hampstead, has 22 cows; they lay in a field adjoining an infected herd of Mrs. Collins's; they broke through the hedge and mixed with them twice that he knew of. I saw him yesterday; he has had no case of illness; that is near to Lord Granville's farm.

4507. Do you know that that herd with which they mixed was infected?—Yes; it was Mrs. Collins's herd of 20 cows; she lost 10 out of the 20; there are 10 still living.

4508. Those cows which were in the adjoining field had escaped, if I understand you rightly?—Yes; Mr. Sharman's cows broke through twice, and mixed with the others whilst they were ill. That is at North End, within 200 yards or so of Lord Granville's farm. I saw Mr. Sharman yesterday, and he gave me these facts.

4509. Is there any other similar case which you can mention?—Yes; a Mr. Randall of Hampstead had from 15 to 20 cows in a pasture only about 40 yards from Lord Granville's infected herd; they are still healthy; he has had no Plague among them.

4510. Was there any direct communication in that case?—No; none at all.

4511. (*Dr. Quain.*) And not one of the cattle belonging to any one of those people whom you have mentioned that you know of has had the disease?— They have not.

4512. Not a single one?—Not a single one. I may mention also that Mr. Claridge, of Claridge's Hotel, had 20 cows at Golders Green, only about 200 yards from Lord Granville's infected herd, and they are all well. And there is another case, which is perhaps more striking. Mr. Buckingham of Childs Hill had a new stock of cows three weeks after the old stock were dead of Plague. They were placed in the same pastures in which the diseased cows died, trod in their excrement, and only a low hedge parted them from Lord Granville's infected herd. They are healthy, all of them. That is 14 weeks ago.

4513. (*Chairman.*) How long after the last diseased cow was in the field was it that they were turned out into the same field?—Three weeks.

4514. (*Mr. Read.*) Was not there any disinfection of the excrements?—Not in the least; he took no precaution; he took no notice of it whatever.

4515. (*Dr. Quain.*) Would you consider that a prudent course to adopt?—No; very imprudent. I only state the fact.

4516. (*Professor Spooner.*) During the existence of the disease in Lord Granville's sheds, were you in the habit of going to Colonel Talbot's?—Yes.

4517. And visiting his cows?—I took the precaution to keep out of his sheds. I went to the farm, and looked after them, but I did not like to go into his sheds, hearing what Professor Simonds and the other professional gentlemen said about it. In consequence of that I did not think it prudent to go into the sheds, but I visited the farm as usual.

4518. Does the result of your experience lead you to the assumption that this is a very infectious disease, or did you merely exercise those precautions on the advice of Mr. Brown, not believing in the

infection?—To a certain extent, I believe, it is infectious. Of course I should adopt the advice of professional men in the first instance; but I do not think so much of professional advice as I did, particularly with regard to cattle. I am satisfied that professional men are very much behindhand, particularly in cattle. In horses I am satisfied with them, but not in cattle.

4519. Pleuro-pneumonia is a disease which you say is usually prevailing more or less in the sheds about London?—Yes; I do not think Lord Granville has ever been a month without it in the last four years.

4520. Have you noticed whether pleuro-pneumonia has been more or less prevalent since the existence of the Cattle Plague?—Less prevalent, I should say.

4521. You give that as the result of your own experience?—Yes; but the fact is that as soon as a cow is ill it is all called Cattle Plague now, and she is slaughtered; there is no chance for the disease to develop itself; everything is called Plague. Even Colonel Talbot, who has never suffered from Plague, has suffered from pleuro-pneumonia. He sent away two cows yesterday to be slaughtered.

4522. Do you think you could distinguish between an attack of pleuro-pneumonia and an attack of Plague in the first stage?—It is difficult to distinguish it; but I think I can distinguish it, having seen so much of pleuro-pneumonia for many years, and having had such a teaching of this Cattle Plague. Under these circumstances I think I could distinguish it. The symptoms are different. I think the symptoms of the Plague are more like those of the foot-and-mouth disease in its early stages.

5523. With regard to the treatment of the Cattle Plague, would you recommend treatment in the event of its breaking out among your animals?—I would. I treated eight myself. I had all the best advice I could get. I allowed any one to treat them who had a remedy, but they all failed except Dr. Chapman, who treated four of the cows with the application of ice down the spine, and one of those four recovered. I did not attribute it, however, to the ice treatment; it was a mild case. I treated eight with stimulants, and saved four. Professor Brown was the inspector, and he considered it quite a favour to allow us to treat them when the disease first broke out, because the Council Orders were so stringent. But he allowed me to treat some, and in one case he said, "If you cure that, it is such a decided case of "Plague we will give you a pension," and that cow is living now.

5524. You have not got your pension, I suppose?—No.

5525. What state have you usually found the bowels in in the earliest stage of the disease?—Rather constipated.

4526. Did you administer anything to correct that, or did you commence with stimulants?—I never commenced until the diarrhœa set in.

4527. You did not treat a cow suffering from constipation at all?—No; I only treated eight cows altogether, and four of them are living now.

4528. You would decidedly recommend treatment in the case of the Cattle Plague?—I would.

4529. Have you not said, with regard to pleuro-pneumonia, that you would not recommend treatment, but that you would recommend the cattle to be destroyed?—Yes, in general. I should be guided by circumstances.

4530. Then I presume you think from your experience that the Cattle Plague is a disease more easily cured than the pleuro-pneumonia?—I do not know about its being more easily cured, but the pleuro-pneumonia does not unfit a cow for human food as the Cattle Plague does. It is a business view that I take of it. If we have a beast attacked with pleuro-pneumonia worth 12*l.* or 14*l.*, if we cure the beast by treatment we diminish her value by one half before she is cured, and it takes some time to get her up to her former value again, and therefore it is better to kill her at once. With regard to the Cattle Plague it is a new thing, and I believe we were all panic-struck with it.

4531. Supposing a cow were killed which was affected with Cattle Plague in its earliest stage, would you be able to detect the fact of its being diseased by examining the meat, presuming all the intestines to be removed, and the carcase to be dressed for butchers' meat?—I believe not.

4532. In fact it would be just as valuable for human food if the animal were destroyed in an early stage of the Plague as if it were destroyed while labouring under pleuro-pneumonia, would it not?—Perhaps it would; but the Cattle Plague has had a much worse opinion formed of it. I do not know whether the meat might be as good or not. I should not fancy it as good myself.

4533. Taking a mercantile view of the case, supposing you had 100 cows, and the Plague were to affect them so that one or two of them were to die, rather than dispose of the other cows you would wait for their showing the disease, and subject them to treatment?—No; not if they were worth anything like their value to the butcher.

4534. You would dispose of them?—I would dispose of them, except in the case of a cow that was in a low condition; that is, looking at it from a mercantile point of view. If a cow was in low condition, and not worth anything for the butcher, I should incline to treat it.

4535. From what you have seen of Lord Granville's cows, and of others in your neighbourhood, what is your idea as regards the per-centage of cures out of those that have been treated?—There have not been many treated in our neighbourhood. They have been sent away indiscriminately, the whole lot together, without any treatment at all. Those cured out of the whole number of Lord Granville's would be about five per cent. only, because they were not treated. Of those that were treated the proportion would be about 20 or 25 per cent.

4536. Do you know Mr. Sweetland of Hendon?—Yes; quite well.

4537. You are aware that he has had the disease badly?—Yes, very badly.

4538. Do you know how many cows he has left out of 72?—Only about four or five; and he has been to great expense, and tried a vapour bath.

4539. Are you not aware that he has adopted a variety of kinds of treatment?—I am aware that he has adopted the treatment of the vapour bath. I do not know what other treatment he may have adopted.

4540. Are you aware of the results of the vapour bath in his case?—Not directly; only indirectly; I believe he has lost seven out of the eight.

4541. And that he has abandoned it?—Yes.

4542. (*Chairman.*) You have stated your views with regard to the contagious nature of the disease. Would you now buy cattle in a public market?—No, I would not.

4543. Why not?—Because the cows might have been in an infected herd.

4544. And that precaution that you would take would be rather founded upon your idea that the disease is contagious, would it not?—It must be contagious to a certain extent.

4545. (*Mr. Read.*) Who doctored Mrs. Collins's cows, 50 per cent. of which recovered?—The other 10 cows were not attacked. I think she had them plugged in the old fashioned way, according to the plan that was adopted when the Plague was in England a hundred years ago. They were plugged in the dewlaps. Those were not attacked, I believe.

4546. Are you quite sure that the other ten died of the Plague?—They did not all die. I think there were four altogether buried. The Inspector who attended them pronounced it to be Plague.

4547. Do you think that the plugging had anything to do with the others not taking it?—I do not think so.

4548. (*Chairman.*) Would you describe the posi-

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tion of those farms which have escaped infection relative to Lord Granville's farm?—They are just round Lord Granville's farm.

4549. There is a road or a common on one side of the farm, I believe?—Yes.

4550. Are they on the other side of the common and the road, or are they in the opposite direction?—In respect of Mr. Tooley's case, the first which I quoted, the common adjoining Lord Granville's farm is the common on to which his cows came. They came up to the front of Lord Granville's house, close to the farm.

4551. They came close to the door of the farm?—Yes.

4552. That is the communication which you alluded to?—Yes. Mr. Sharman's, the second case which I quoted, is on the opposite side at the north-eastern corner of the common.

4553. In that case there is a common and a road between Lord Granville's farm and Mr Sharman's?—Yes; but Mrs. Collins's cows were close. There was only a hedge to part them; in fact they broke through twice.

4554. They broke through on to your farm?—No; Mrs. Collins's. Buckingham's case was the fifth which I mentioned. The pasture in which he placed his cows, and in which the other cows had died of the Plague, adjoins Lord Granville's, on the south side of Lord Granville's farm. There was nothing but a hedge between them.

The witness withdrew.

GEORGE BUCHANAN, Esq, M.D., examined.

G. Buchanan, Esq., M.D.

4555. (*Chairman.*) I believe you are a Medical Officer of Health in some district in London; will you state what that district is?—St. Giles's district.

4556. You are also connected with the Metropolitan Association of the Medical Officers of Health, are you not?—Yes; I am their secretary.

4557. I suppose that the subject of the outbreak of Cattle Plague in the metropolitan district has come under your notice officially?—Yes, in both those capacities.

4558. Could you give us any general information on the subject of the origin of the Cattle Plague?—I have very little information to communicate. It appeared first in my own district rather late, although it is a central district of London. It did not appear until September, I believe. I had heard of it in St. Pancras and in Islington for some months before, and I was on the watch for it.

4559. Could you trace at all the origin of the Cattle Plague in your own district?—No. The first case occurred in a shed where there were only three cows kept, in what perhaps I should describe as being one of the best sheds in the district. It was in Bloomsbury; not in the dense parts of St. Giles's. The proprietor of the shed could not make out that there had been been any sort of communication with the diseased animals, and he had been rather strict in keeping needless visitors out of his shed.

4560. Had he made any purchases recently?—He had made no purchases.

4561. Are there many cases of cowsheds that have not been attacked in your district?—Several cowsheds have not been attacked, because all the cows had been removed as a matter of precaution. I think there is but one cowshed where the animals have not been removed, and have not suffered from the disease; and that is a cowshed in Drury Lane. It is one of the inferior sort of cowsheds, and there, as far as the statements of the proprietor are to be trusted (and I have no reason to doubt them), he has not lost any cattle by the Cattle Plague, although he has lately lost several by pleuro-pneumonia.

4562. Can you trace any reason for his immunity from the prevalent disease?—No. I tried to find out whether he had been more careful than his neighbours; but I could not discover that he had been. He had admitted to his premises people who had official business there, and had a veterinary surgeon there from time to time. I had been in them myself, and he had not asked me any questions that led me to think he took special precautions. That is in a neighbourhood where there are a good many cows.

4563. Had he made any purchases in the market?—No; he had not until a fortnight ago. He has got a little bolder now, and a fortnight ago he purchased two cattle, and a week ago another one or two. I heard from him to-day that they were all well.

4564. Did he purchase those in the Metropolitan Market or from private dealers?—He got them from a man near Barnet. He thought that was safer than going to the market.

4565. Has it been the practice of those who have escaped from the disease not to purchase in the public market at all?—I believe so. As I say, I have not had much experience of those who have escaped the disease; but it was one of the earliest pieces of advice I gave to all the cowkeepers in my district not to bring any fresh cows in, and not to go near the market if they could possibly help it. I gave them that advice as early as July, and they kept to it, I think, pretty well. There were very few, if any, new cows brought into the district; but there was a large number of them there already. There used to be from 150 to 160 in the district, and there are only between 20 and 30 now. A great many have been got rid of as a matter of precaution, while others have died.

4566. I suppose, as a rule, the medical officers of the districts are brought very much into contact with the cowkeepers in London?—Yes; their opinion is always taken. They go round to the sheds occasionally, particularly before the licensing day in September or October.

4567. As part of their duty they would visit these dairies to see that they are in a proper condition?—Yes; that is to say, to see that they are not nuisances or injurious to the public health. I think that is very much how they look at them.

4568. From your experience, what is your opinion of the condition of the London dairies at this time?—They are by no means satisfactory, but they are vastly better than they were three or four years ago, before the system of licensing was in force.

4569. At the time you refer to were they in a very bad condition?—They were then in a very bad condition; they were often over-crowded and dirty, with scarcely room for the cows to lie down in; and now they have very much improved on that; they all are drained, and they are all periodically washed, and they are ventilated more or less; I cannot say satisfactorily.

4570. What has been the apparent cause for the improvement in the condition of the cowsheds?—The system of licensing; the requiring every cowhouse to have a licence. The local authorities may show cause against the granting of a licence, if they find the sheds in a bad state; and no doubt the magistrates would think right to refuse the licence if a cowshed were in a very unsatisfactory state.

4571. Was there an Act of Parliament passed altering that state of things?—Yes; the Metropolis Local Management Amendment Act.

4572. In what year was that Act passed?—In 1862, I believe.

4573. What were the particular alterations that were introduced by that Act?—Only giving the magistrates power to license cowhouses, and the local authority power to show cause against the licensing if the local authority was not satisfied with their condition.

4574. What are the particular causes which the local authorities have to show in order that the licence may be withdrawn from a cowkeeper?—In

my own district we took wide ground about that. We tried to persuade the magistrates not to license any cowhouse at all, on the ground that they were injurious to human health, and nuisances; but the magistrates would not take that ground with us, and they licensed all the cowhouses in which gross and specific nuisances were not alleged. They licensed them at first when the question was raised, and they have licensed them in subsequent years, telling the cowkeepers that they must comply with the rules the local authority lays down.

4575. If the rules laid down by the local authorities are carried out in a locality which is not fitted for any cowhouses at all, what takes place then?—Under these circumstances, in my own district, the cowhouses are licensed; they were licensed this year in spite of another protest from myself. Seeing that the local authority would not renew its opposition, a member of our board of St. Giles's, together with myself, determined to do so. We took upon ourselves to make a representation to the magistrates, and told them again how much harm was done to public health, and in our judgment what facilities for spreading the disease among cattle were given by having the cows in London. But the magistrates did not take our view and licensed them all the same.

4576. Your inspection of course is directed to seeing that there are no nuisances which would be injurious to the public health?—That is my primary object.

4577. But in doing that of course cowhouses would be brought to your notice that were in such a state as would be injurious to the health of the cows that were in them also?—Yes.

4578. Will you hand in a copy of the rules that are in force in your district relative to cowhouses?—Yes; I have a copy here.

The same were handed in, and are as follows:

REGULATIONS adopted by the Board for the future Management of Cowhouses in St. Giles's District.

1. Every cowhouse shall be on the ground level. Cowhouses under inhabited rooms, or in immediate proximity to sleeping rooms, cannot be permitted.

2. Every cowhouse shall give to each cow a space 12 × 6 superficial feet, exclusive of gangway and channel. The cubic space for each cow shall in no case be less than 1,300 cubic feet.

3. Every cowhouse shall be well-lighted and well-ventilated, both in summer and winter.

4. The paving must be uniform, and the channels behind the cows must be of Yorkshire stone, or of sound brickwork in cement, of the width of 2 feet 6 inches at the least, sloping towards the entrance of the drain.

5. Dung pits shall be constructed of york stone sides and bottoms, set and jointed in cement, and shall be provided with proper drains. Dung shall be removed from the premises, where there are upwards of 10 cows, daily; where there are less than 10 cows, every second day; and always before 8 o'clock in the morning.

6. The sheds shall be swept and thoroughly cleansed at least twice a day, and the yard once a day. Every part of the cowhouses and yard shall be lime-whited twice in the year.

7. Every cowhouse and yard shall be provided with underground pipe drains to the public sewer, furnished with efficient traps at their entrances.

8. Every cowhouse shall be supplied with water at the highest part of the channel in each shed.

9. There shall be two covered pits or receptacles, properly drained, for the stowage of grains; or if there be one pit, it shall be divided by a partition, and each part shall be properly drained. Grains and other food shall not be kept so as to become offensive.

4579. Those are regulations adopted by the Board "for the future management of cowhouses" in the district of St. Giles's?—Yes, in 1862.

4580. What board is that?—The St. Giles's District Board of Works.

4581. In these regulations is only the health of the inhabitants near the cowhouses considered, or is also the health of the animals in the yard considered?—I do not think that we cared much at that time about the animals, provided they did not give unwholesome milk. We thought it was important to put them in the best conditions for yielding wholesome milk. I do not think we cared, when those regulations were framed, about the health of the cows in other respects. If a man incurred heavy losses we thought it was his look-out. It was for the protection of the public that we were acting. And to a certain extent we cared for the animals, because we supposed that a healthy cow would give the best milk.

4582. The first regulation is "Every cowhouse "shall be on the ground level. Cowhouses under "inhabited rooms, or in immediate proximity to "sleeping rooms, cannot be permitted." I suppose that regulation points to this, that a cowhouse, even under the best possible sanitary regulations for drainage, and so on, as regards the cows, might be in such a position as to be very detrimental to the health of the neighbourhood?—That was what we thought.

4583. The second regulation, which requires a certain space of superficial feet for every cow, would point rather, I suppose, to the health of the cow itself?—Yes.

4584. The cubic space for each cow shall in no case be less than 1,300 cubic feet?—Yes, that is the regulation.

4585. Has this Act of 1862 improved very much the condition of the dairies and cowsheds in the metropolis?—I believe so, everywhere. It certainly has in the district of St. Giles's, and I believe it has done so equally, or to a great extent, in all parts of London.

4586. I have been told by the cowkeepers in the metropolis that the system of licensing has introduced such a question of doubt as to whether they should be permitted to go on with their businesses, (that is, whether their sheds are well regulated or not,) that they have deferred a great many improvements in the cowsheds in consequence. Do you suppose that it is at all the case that they have been afraid of laying out money in consequence of the uncertainty of the tenure of their cowsheds?—I think it is possible. The cowkeepers of my district feel it a great hardship that I should oppose them year after year before the magistrates. They think that if it is desirable to get rid of them they should be bought out and sent away. With that feeling I think it is very likely that they would not do so much in the way of reconstructing their premises as they would if they felt sure of their tenure.

4587. Notwithstanding that you think there has been a considerable improvement in the construction of the cowsheds?—I am sure there has been a great improvement for all that.

4588. Do you think then that it is likely that the Cattle Plague should have originated from the bad state of the London dairies and the cowsheds; that is to say, that it should have broken out spontaneously, as we have been told it did?—No, I do not think it is at all likely, because I think they are in a better condition now, and they have been for the last two or three years in a better condition, than they ever were.

4589. (*Viscount Cranborne.*) You spoke of taking objections before the magistrates; are those the magistrates at quarter sessions?—I believe so; they are known as the Michaelmas Licensing Sessions; those are the quarter sessions, I think.

4590. I understood you to state that the regulations were enforced by the district board of works?—Yes.

4591. What is the penalty if those regulations are not obeyed?—That the cowkeeper's licence is opposed the next year.

4592. It is opposed?—Yes.

4593. But if the magistrates take a counter view to the board of works, the regulations would be entirely futile?—Quite so.

4594. In fact the regulation of cowsheds is under a double government; is it not?—Yes.

4595. Do you not think that those regulations would be more efficient if the same power enforced

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them as laid them down?—I am not sure that they would. I think it would be difficult to get the local board or vestry to refuse absolutely to license a cowshed even though they knew it to be a nuisance; they would have just as many scruples about it as the magistrates have.

4596. Then the regulations, as I understand you, are laid down, but not intended to be observed?—Yes; they must be observed up to a certain point. I think that the practice of the magistrates having the power to grant or refuse a licence comes to very much the same thing as if the local authority had the carrying out of their own byelaws. I am speaking of it in practice. Of course it is not logical or reasonable that there should be a double authority in the thing.

4597. You do not think that the board contemplated the entire and complete carrying out of their own regulations?—I think that they shuffle a good deal of the responsibility on to the magistrates.

4598. Do you not think it would be more simple if they laid down such regulations as they expected to be carried out, and then had the power of enforcing them?—Certainly; that would be the simplest way of doing it. Perhaps I may illustrate what I mean when I say that local authorities are apt to hesitate in giving effect to their convictions. Some local authorities at present are of opinion that cowsheds should not exist in the crowded parts of London, yet they will not use what power they have to oppose the licences before the magistrates; they are content to tell the magistrates that the responsibility shall be on them, the magistrates; and if the magistrates choose to license them, well and good. They do not oppose them definitely. That was the case with one board, I remember, at the sessions this year.

4599. The magistrates are not composed of persons residing principally in the neighbourhood of the cowsheds, are they?—I am afraid they are not. I wish they themselves experienced the nuisances of cowsheds.

4600. Therefore they are not persons who can be supposed to have any very acute and lively interest beyond what public feeling would inspire, in the healthiness of the cowsheds?—Quite so.

4601. Is it your opinion that such a body as that, not closely connected with the localities in which the cowsheds exist, is the best for carrying out a system of this kind, or would you prefer on the one side a more strictly local authority, or on the other do you think that the management in the hands of the central government for the whole of London, producing thereby, a uniform system, would be more expedient?—Certainly I should prefer a uniform system.

4602. You would prefer to place the whole system in the hands of the central government?—Yes; the central government of London.

4603. And that on the ground that it would produce greater uniformity?—And greater independence of action too.

4604. It would produce greater certainty?—Yes; greater certainty of action.

4605. By "central government" I presume you mean the Executive Government of the country?—No. I understood you to say the central government of London. I do not know that such a government exists, but I was assuming that it did exist; you were putting a case, I think.

4606. Assuming that at present we are not likely to have a central government of London proper, would you prefer to be under such local authorities as we have been speaking of, or under the Executive Government of the country?—Certainly there would be advantages in giving to the Executive Government of the country the decision whether cowhouses should be retained in London, and under what conditions.

4607. Do you think that your own duties would be facilitated if such were the case?—I have no doubt of it.

4608. I understood you to say that what the district boards principally attended to was the effect of the cowhouses upon the character of the milk, and that they did not pay much attention to the effect of the cowhouses upon the sanitary condition of the surrounding districts?—No; on the contrary that is what they pay most attention to. They would, as a secondary matter, try and keep the cows in health, because they think it likely that the healthiest cow will give the most wholesome milk, but it is only as regards the effect that the cows' milk might have upon the human consumer that they would care at all about the health of the cow.

4609. It has been stated before this Commission that it would be injurious to the milk if it had to be brought every morning five or six miles from the country; is that your opinion?—No. I believe a large proportion of the milk is now brought up in that way.

4610. You do not think that the quality is at all deteriorated by the carriage?—I think not, when proper precautions are taken. I know that it is constantly stated that it is so; but I think that is for the want of knowing the minute precautions, as to cleanliness and so forth, which are necessary for carrying it.

4611. I suppose that those who furnished it might be trusted to take those minute precautions?—Yes, they would do so in their own interest.

4612. So far then as the quality of the milk is concerned, you see no objection to removing the cowhouses from London?—None at all.

4613. You spoke of the cowhouses being bought and sent away; would not the sale of the premises used for that purpose in London be so profitable that buying them would scarcely be necessary? Do you think that any jury would assess any large damages for the loss which the cowkeepers suffered in being removed to the country?—I do not know how that would be at all.

4614. Do you imagine that they themselves would look for any large compensation?—I do not know that either. My impression is (but it is worth nothing) that they do not expect very much, but that they would be glad if they got the value of their premises. I know that most of them would be very glad to be taken down for a railway.

4615. (*Mr. Read.*) Can you give the Commission any idea of the average mortality among the cows in your district?—I suppose you mean in ordinary years; it is stated variously to me; it depends very much upon the practice in different sheds. In some sheds they practice inoculation for the pleuro-pneumonia. In sheds in which they do not inoculate for the pleuro-pneumonia I suppose from a quarter of the cows upwards, may die in the year, not unfrequently. In sheds where they do inoculate for the pleuro-pneumonia there is a much smaller mortality, I believe.

4616. If the present disease was originally generated in the London dairies, you would not have looked for the outbreak in the high and airy districts of Islington, I suppose?—No.

4617. But rather in your own district?—I should have supposed so, if it were generated de novo from any cause connected with the locality of London cowsheds.

4618. You think that your own district would be more likely to furnish cases of spontaneous origin than the Islington district?—I should have supposed so; but I do not know the character of the interior of the Islington cowsheds as well as my own.

4619. They are not generally considered worse than those in your district, are they?—I do not suppose so, except as regards the locality in our case.

4620. I mean taking into consideration the locality, and the airiness, and so on, in that respect the cowsheds in your district would be worse?—Yes, I think they must be worse; they are almost all in St. Giles's parish, and in the upper part of Drury Lane, the most crowded and confined locality of all London, I should think.

4621. And yet you had none of the disease until September?—There was no case of disease till, I believe, the 4th of September. That was the first case.

4622. (*Mr. Wormald.*) Do you think that in the event of the London cowsheds being removed to the country the same kind of feeding would be followed by a better quality of milk than it is now to a material extent?—If the question is whether placing the cows in the country with the same feeding would cause them to give better milk I have no information that enables me to answer that question.

4623. Would cattle fed in the country in the ordinary way yield a better milk than that which is now produced in the London dairies; a more wholesome milk?—I should think so.

4624. It would be a better quality?—I am quite of that opinion.

4625. So that in case of their being removed from London to the country, and fed as dairy cows in the country are, there would be no essential difference in the quality of the milk?—I understand your question to mean, does the quality of the food, without the influence of London, make much difference in the milk? I should think that the way in which they are fed in London cannot be the most wholesome; it is a very highly stimulating food that is given to them, and one which is calculated to make them give an enormous quantity of milk.

4626. The object is, I believe, to obtain quantity rather than quality; and the same practice would be followed if they were removed into the country, I presume?—I presume it would.

4627. (*Dr. Quain.*) Have many cowsheds been closed since this more careful inspection has been made in your district?—No; all the cowsheds are licensed now that were licensed before.

4628. Do you know whether in the adjoining district of St. Pancras any licences were refused for sheds which had previously existed in that district?—No; I am not sure about St. Pancras; but in St. James's, Westminster, all the licences were refused, I believe.

4629. On your district the improvement has been such that you have not required the harsher measure?—No; the local authority has latterly not opposed the licences, on the ground of the cowkeepers having done a great deal towards improvement.

4630. With regard to the central body spoken of, would the Metropolitan Board of Works be in your opinion a suitable one to superintend the issuing of licences?—I should think it would be a very proper body.

4631. If the drainage, for example, and the lighting and the cleansing of the streets of London, were committed to that body, would this be a duty which you think might be properly assigned to them?—Yes; I think they would be a proper body.

4632. (*Dr. Bence Jones.*) Have you seen much of the cattle disease? Have you witnessed many cases?—Not very many. I have seen some.

4633. Had you ever seen anything like it before?—No; but then I never saw much of cattle diseases before.

4634. Have you seen much of the inoculation for the pleuro-pneumonia?—Not much. I have seen, occasionally, a cow suffering from the result of it.

4635. Do you think that many cows are saved in London by the result of that inoculation?—That is the statement of the cowkeepers. They say that they do not lose many by the process of inoculation, and that, after the cows are inoculated, they are very unlikely to get the disease in the sheds.

4636. Have you seen the process of inoculation?—I have not seen it actually done, but I have seen cows suffering from it, with their tails and the end of the spine a good deal swollen.

4637. Are they inoculated with the discharged matter from a diseased animal?—I believe they are inoculated with some of the secretion from a diseased pleura.

4638. From a dead animal?—Yes.

4639. (*Chairman.*) At the present moment you believe that the cowsheds in London are better drained and ventilated, and in a better sanitary condition, than they have been for some years past?—Yes; than they were up to 1862.

4640. Your objection to them is simply on the ground of their being unhealthy for people to live near?—Yes; that is my great objection to them.

4641. Have you any experience with regard to slaughter-houses in London?—I see something of them in my own district. The rule with regard to London slaughter-houses is, that one is attached usually to every butcher's shop, and there is no supervision of them, except to see that they are kept clean. I mean there is no supervision over the animals that the butcher slaughters.

4642. Are there any very large number of slaughter-houses in London?—A very large number; several hundreds in London altogether.

4643. Those slaughter-houses afford great facilities for people who have diseased animals sending them to be slaughtered without the inspector seeing them, do they not?—Yes.

4644. Do you think that that is a great objection to them?—I think it is. I have urged it before the Cattle Plague was talked of. I have said that there were great facilities for disposing of diseased meat in that way.

4645. You consider, of course, that it is important that there should be an early detection of any disease; and you believe that the number of these private slaughter-houses very much prevents the early detection of any contagious disease?—Yes, I do.

4646. Are those slaughter-houses under any sort of inspection?—They are inspected and licensed much as the cowhouses are.

4647. By what inspector?—By the inspector of the vestry or board of works in each district.

4648. Is that inspector the inspector of nuisances?—He is. In my own district a committee usually visits the slaughter-houses every year; and as officer of health I visit them occasionally.

4649. A committee from the district board of works visits them?—A committee of the board usually visits them before the licensing day.

4650. You do not see, I suppose, how they are conducted with regard to the slaughter of diseased animals at all?—No. One has no information at all about that.

4651. Do you think that the inspection is sufficient with regard to preventing a nuisance to the public health?—That is all that they look to.

4652. In all cases of inspection and licensing, the board of works in London act as public informers, I suppose, appearing before the magistrates in that capacity?—Yes, with a special locus standi given them by the Act of Parliament.

4653. Have you any experience of the number of animals that are sent from cowsheds in a diseased state to the slaughter-houses in London?—No; I have no knowledge of that.

4654. The number of those slaughter-houses would render it very difficult to ascertain that, I suppose?—It would be very difficult.

4655. Do you think that any public system of slaughter-houses could be established with advantage?—I think it would be very desirable indeed that we should have public slaughter-houses.

4656. Do you think it would be practicable at present, considering the large consumption of meat and the enormous extent of the town?—I think it would be quite practicable, with the facilities of communication that exist.

4657. Have you ever prepared any scheme in your own mind for establishing public slaughter-houses?—I have a rough knowledge of how the meat trade is carried on in some large towns, where a system of public slaughter-houses is in operation, the Paris system, for example.

4658. How would you apply that system in London?

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I should imagine that there might be a certain small number of abattoirs round the metropolis in connexion with the railways leading into the middle of the town, and that animals coming from the country could be stopped there, and their meat sent on into London.

4659. Supposing you maintain the present system of a live meat market in Copenhagen Fields, would you be able to carry out the same system?—If you mean in connexion with the market, I suppose you might; but I have not considered the existing arrangements to see how they should be worked into a system of that kind.

4660. Would you be in favour of stopping all live stock coming into London?—I think it would be a great advantage.

4661. Where would the market be for the metropolis for dealers in fat cattle and butchers' meat?—It does not appear to me that it is needful to deal in live fat cattle within the metropolis.

4662. You would have the butcher purchase of the breeder or feeder of stock in the country?—I suppose there would be an intermediate agent then, as now; but I am afraid that I cannot help you very much as regards the details of the trade.

4663. Can you state the number of slaughter-houses there are in your own district?—I believe there are 13 or 14 in our population of 50,000 people; that would give a good many hundreds to the whole population of London.

4664. (*Mr. Read.*) It is a very easy matter, then, I suppose for a diseased cow to go into a slaughter-house and be killed without any one's seeing anything of it?—I should think nothing was easier.

4665. A live stock market just outside London would under any circumstances be necessary to supply this city with meat?—Yes; just outside London I suppose it would. I was not contemplating that the abattoirs I spoke of should be far off.

4666. (*Chairman.*) Have you any information as to the movement of the cows in dairies?—I find that it is customary to get rid of cows, if they are ceasing to give a very large supply of milk. That it is most profitable to the dairymen to have cows which are furnishing them with the utmost supply of milk, and to get rid of them immediately they begin to give less. Therefore if a London cowshed contains 50 cows, it is probable that another 25 will pass through that cowshed every year; sometimes I daresay as many as 50 others will pass through that cowshed in the course of the year. That is the case merely from the new cows being brought in in full milk, and from the old cows being taken away because they are not giving so much milk.

4667. In that way, I suppose, if there is any disease in a cowshed it is very rapidly communicated to the market?—So I should believe.

4668. I see there are some rules in this paper with regard to the dung pits and places for manure attached to the cowsheds. What generally becomes of the manure?—It is kept until there is a certain quantity of it, and then it is taken away, according to those rules pretty well.

4669. Since the prevalence of the Cattle Disease, do you suppose that those dung-heaps have been properly disinfected?—I do not suppose they have.

4670. I suppose, as a rule, we may gather from what you have told us, that the cowsheds in the metropolis are well drained and well supplied with water?—Yes, that is the rule, certainly.

4671. (*Viscount Cranborne.*) Does your inspection include the butchers' shops?—Yes; I inspect their slaughter-houses, which are in connexion with their shops. In my district the slaughter-houses are all in connexion with the butchers' shops.

4672. Do you seize bad meat?—Yes, I believe I should have authority to do so if I came across any, but I have never come across any bad meat.

4673. From which it may be inferred that bad meat very seldom comes into your district, I presume?—Or that I am not very alert in looking after it.

4674. But I presume you would see it if there were any bad meat there?—Yes; if it were very recognizably bad meat.

4675. You have no knowledge then as to the amount of time for which, speaking strictly from a sanitary point of view, it could be kept?—Do you mean under the worst circumstances of weather?

4676. What I rather wished to ascertain was whether you had constructed any formula in your own mind, however roughly, arranging the time for which meat could be kept, according to the temperature of the season?—No, I never have; I imagine it would depend very much upon the methods of packing, and the methods of conveying the meat.

4677. Assuming those to be at their best, are there any scientific data for deciding the length of time during which meat can be kept in reference to the temperature and the season?—I should think it would be easy to get such data, but I do not know that they exist.

4678. Are there any indications scientifically established by which you can tell at once whether meat would be injurious for food or not?—I believe not.

4679. It is a very vague judgment in each case that you must form?—There are some diseases in which you could tell at once that the meat would be injurious if used for food.

4680. But there is a very large intervallum?—I believe so.

4681. I presume then, from your answers, that this matter has not been made the subject of special scientific study?—I believe it has not yet sufficiently.

4682. (*Chairman.*) Have you any other information that you think would be useful to the Commission?—I fear there is no other point upon which my experience is of any value.

The witness withdrew.

Mr. Thomas Poynton Dexter examined.

Mr. T. P. Dexter.

4683. (*Chairman.*) I believe you have a large cowshed in London?—I have.

4684. Are you connected in any other way with the cowkeepers of the metropolis?—I am the chairman of an association of them.

4685. What does the association consist of?—Our object has been mutual protection principally.

4686. Against losses by disease?—No; not against losses, but merely for the purpose of meeting together in order that in any emergency we might adopt measures in concert.

4687. In what kind of emergencies?—We formed our association just when it was first rumoured that the licensing system would be adopted, and when an agitation was started against keeping cows in London, our object of course being to retain the cows.

4688. Have you many members belonging to your association?—Not very many; from 30 to 40.

4689. You are in pretty constant communication with other cowkeepers, I suppose, in the metropolis?—I am.

4690. Can you give us any information as to the outbreak of the Cattle Plague in London?—The first case I knew of was that of Mrs. Nicholls of Islington.

4691. You have not been able to find out any earlier cases than that, in Lambeth or elsewhere?—I have not.

4692. Do you believe that the Cattle Plague had its origin among the cowsheds in London?—I do not.

4693. What is your reason for holding that opinion?—I believe it was brought from abroad; at the time that I heard of its appearance from the communication of friends, I was led to believe that that was the case.

4694. What is the condition of the cowsheds in the metropolis generally?—I think generally good.

4695. They are generally well ventilated and well

drained?—Generally they are well ventilated, and kept exceedingly clean. There is much more attention paid to cleanliness than in country places.

4696. How comes that to be the case?—Because we find it necessary, and we employ more labour proportionately.

4697. Can you tell us what is the ordinary mode of managing a dairy in London with regard to keeping up the stock, and so on?—We generally buy animals, and bring them in just after calving, and keep them as long as they milk sufficiently to pay us. By the time that they have ceased milking sufficiently they are generally fat enough for the butchers.

4698. You do not attempt to breed in a dairy?—No; we never breed.

4699. Is the feeding very different from the feeding of cows in an ordinary country dairy?—I think the only difference is the use of the brewers' grains in London. In other respects I think that our feeding is very closely like that adopted in the country generally; in fact grains are being used now more in the country than they were.

4700. What is the effect of that particular feeding on the milking qualities of the cow?—A cow will give more milk by the use of the grain.

4701. Do you consider the quality of the milk produced by the London cows at all different from that coming from country dairies?—We have not much opportunity of judging. We find, however, that when we have milk from the country we cannot get cream from it. Our milk will throw much more cream than the country milk.

4702. How do you account for that difference; does it arise from the mode of feeding the animal, or from the shaking that the milk gets in its passage to London?—I think probably both. From what I have seen of the country milk and the London milk myself I judge that our London milk is richer in cream, but theirs is richer in curd.

4703. What effect has the particular feeding in the London dairies upon the constitution of the cows; do you suppose that they take a disease more easily than cows in a country dairy?—If they are overfed, as they are by some of the London dairymen, I believe that they are more susceptible of disease. I believe that some of the London dairymen do overfeed their stock, and consequently do render them more susceptible, but I think otherwise they are not so; that is to say, if they are but moderately and fairly fed.

4704. Do you think that there is more pleuropneumonia, or foot-and-mouth disease, in the London dairies than in the country dairies?—From reports that I have received I should say decidedly not.

4705. Has not the constant change of stock, involving a constant buying of fresh cows, in the London dairies, some effect upon the health of the animals?—Of course that exposes us to greater danger, but that would apply to a country farmer who kept stock for the London trade. Any country cowkeeper that sent his milk to London would be liable to it, because he would be placed just under similar circumstances to ourselves.

4706. You are alluding to dairies in suburban districts like Willesden and Hendon, I presume?—No; of course at the present time milk is being sent up from all parts of the country to London, and whenever a large quantity is being sent up to London, and contracts are entered into for the regular supply of milk, the cowkeeper is placed in the same position as we are, because that supply must be kept up by the addition of fresh animals from time to time, and those must be obtained where they can.

4707. Has there been much change in the condition of the London dairies in the last few years?—For some years past there has been a gradual improvement, but I do not think it has been particularly marked in the last few years.

4708. What has been the effect of the licensing system upon the London dairies?—I should be disinclined to ascribe much influence to it.

4709. Has not that system done away with a good many, particularly ill drained and dirty sheds?—Not to my knowledge.

4710. Are you opposed to the system of licensing? I am; because I consider that instead of offering an incentive to improvement in the sheds it puts a very serious obstacle in the way of such improvements. No man will be willing to lay out money upon property unless he feels that he is secure in the possession of it; and when conscious that he may be deprived of his shed from year to year he feels the tenure so precarious that he will not lay out much upon it.

4711. But I suppose as long as a cowkeeper complies with certain sanitary regulations he is pretty sure to get his licence, is he not?—I do not think so. I know Mr. Thrupp stated that he considered the licensing system designed to do away with the sheds in London gradually, and therefore, acting upon that principle, he considered that if objection was raised against a shed a justification was supplied for removing or rather withholding the licence. Consequently the licensing system renders us subject to the caprice of a few, and open at any time to such opposition as shall deprive us of our licence.

4712. Would there be any great hardship in doing away with the London dairies?—It would tell very unequally. In some cases I believe that the hardship would be very slight; in others, where, for example, a man has laid out a considerable sum of money upon the premises, and where they are comparatively useless for any other purpose, the hardship would be great.

4713. Could the trade be carried on without London cowsheds?—That is a question which it is very difficult to answer. I should scarcely be prepared to say that it could not, but I believe that there would be a very great amount of inconvenience attending it.

4714. How so?—In the first place, if you have all your milk from the country you necessarily have that milk twelve hours old before delivery. For instance, the milk delivered for breakfast in the morning is that milked over night, and the milk delivered in the afternoon is that milked early in the morning. Of course in the winter months that is a matter of little or no consequence, but in the summer months, in the excessively hot time of the year, it is frequently attended with inconvenience; the milk is sour before it is delivered.

4715. Whom do you go before to obtain your licence now?—The justices at petty sessions, I believe.

4716. Are they the petty sessions or the quarter sessions?—I believe they are the petty sessions; but that is one of the licences (*producing a paper*).

4717. What is the usual number of the magistrates who form the tribunal before whom you go?—Two or three; two very often.

4718. Is there any constant rule which they apply to the granting of licences?—If there are no objections taken, the licences are granted as a matter of course; they have been granted hitherto, if no exception is made.

4719. Who generally take the exceptions to your licences?—The exception may be taken by the vestry through the medical officers or the sanitary inspector, that is the inspector of nuisances, or of course any parishioner or any resident in the neighbourhood may raise an objection.

4720. And they are refused on two grounds, either that the locality is not fitted for any cowsheds at all, or that the cowsheds in the locality are not kept clean and in proper order?—I suppose that would be the ground assigned, but I do not think the magistrates are required to assign any reason for withholding a licence.

4721. Do you mean that it would be sufficient for one of your neighbours to go and complain of your cowshed without stating any grounds, and that then

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the licence would be withdrawn ?—No ; of course the neighbour would have to make some complaint.

4722. (*Mr. Read.*) And to state the grounds of the complaint ?—Yes.

4723. (*Chairman.*) Then would you prefer some other tribunal to the present petty sessional division of magistrates before whom you go ?—I think myself it would be better vested in the hands of the vestry than according to the present plan.

4724. Why would you prefer that body ?—Just for this reason, that I know that many of the justices have strong personal prejudices in the matter, and I think that it is scarcely fair that the interests of a large class should be placed without any power of appeal in the hands of one or two individuals, because it is not a question of law that has to be decided.

4725. You do not object to the principle of licences in general, supposing that they were tried by a fair tribunal, and on fixed principles ?—No, I do not ; in fact I think that under those circumstances they would operate well.

4726. (*Viscount Cranborne.*) Who are the three magistrates who licensed you ; are they resident in the neighbourhood ?—I suppose so.

4727. Do you know anything about them ?—Mr. Thrupp is well known ; he was the chairman when I was licensed. I do not know him further than having seen him there.

4728. Do those three gentlemen always sit upon the same petty sessions, or are there a large number of persons out of whom they are accidentally selected? —Mr. Thrupp has been there on each occasion ; and this morning before coming here I looked at my licence, and I find that Mr. Cotterell has been there, I think, on each occasion ; I think that is the gentleman's name ; his name is signed each time to the paper ; but Mr. Thrupp is the principal person, evidently.

4729. You do not know at all where they reside ? —No, I do not ; of course I have never had the least occasion to inquire.

4730. Have they laid down for you any set of rules or regulations by complying with which you could secure the continuance of your licence ?—The vestry require of us certain conditions without complying with which we cannot retain our licences.

4731. Have the vestry the power of taking your licences from you ?—No ; all they can do is to oppose before the justices.

4732. Then if Mr. Thrupp does not agree with the vestry these regulations would not be carried into effect ?—They have the power of objecting, but I believe that Mr. Thrupp has the power of decision entirely, or, rather, I should say, the magistrates generally, not Mr. Thrupp alone.

4733. I understand that the board of petty sessions have laid down no sort of conditions or rules by which you are to guide yourself for the purpose of retaining your licence ?—They have not ; the vestries have.

4734. Have the petty sessions formally accepted the rules of the vestry ?—I suppose so.

4735. But you do not know that they have ?—I do not know it. I take it for granted, because, of course, they have made no others.

4736. Is not your present position rather a precarious one, under these conditions ?—We think so ; we quite recognize that.

4737. Should you not prefer some final and definite decision of the question, whether you were to have the right to live in London or not ?—Of course we should, because we know that it is the impression of many of these magistrates themselves that the design of this licensing system was to drive us out of London gradually.

4738. I suppose you would rather he driven out at once than gradually ?—We should ; because it would be much fairer and more just to make one measure affecting us all than to strike one man off to-day and another to-morrow, thereby giving an unfair advantage to the remainder as long as they stopped.

4739. It is not a very creditable way of dealing with any class of persons to attack them upon another pretext, when really it is desired to remove them from the district altogether ; is that your opinion ?—We think so ; we quite recognize that.

4740. But then supposing you were removed there would be large questions of compensation to be settled, I presume ?—There has been no question of compensation hitherto ; sheds have been taken again and again, and of course no compensation made for them.

4741. You mean that if a licence is refused to you, you have to go, and without compensation ?—If a licence is refused, it is no matter what we have expended upon the premises ; those premises have been practically forfeited for the purposes for which they were erected ; it is no matter how long they have been held ; no compensation is given for them.

4742. Therefore an actuary would not estimate at a very high amount the value of your tenure of your cowsheds at the present moment ?—Of course not. In reality there would be very little claim for compensation with regard to the premises, I should say. I am not speaking now of exceptional cases, but in many instances the premises, would be available for other purposes ; for instance, I have let my own sheds, or rather I believe I have. I am in terms now with a gentleman to let them to him to convert them into stables.

4743. In the majority of cases you think that a similar use could be made of the premises ?—Yes ; of course they have become more valuable now for other purposes than for sheds.

4744. I suppose that in all cases the cowkeepers would be contented to submit their claims to the consideration and the decision of a jury ?—Yes ; I think so.

4745. I understood you to say that the milk delivered in the morning in London, having come from the country, was the milk that was taken over night ; is it not the case that the milk comes in at four or five o'clock in the morning by railway trains ?—Very rarely ; at any rate not from any considerable distance. I know that if you were to go, for instance, to any of the stations at from 10 to 11 o'clock at night you would see what a quantity of milk is brought there. That would show you that by very far the larger quantity, I may say in fact the whole of it, with very slight exceptions, comes up overnight.

4746. (*Mr. Read.*) Do I understand you that when a licence is taken away from an occupier of a shed it is never renewed to another occupier of the same shed ?—I think not.

4747. What does your licence cost you ?—Only 5*s.* ; the cost is merely nominal.

4748. Is that paid in fees ?—I do not know ; I suppose that there is no fee with it ; there is just a charge of 5*s.* The Act requires that it shall not exceed 10*s.*

4749. Is it possible greatly to increase the quantity of milk from a cow without at the same time deteriorating its quality ?—I believe it is.

4750. Would you tell me how ?—By feeding ; but I believe that that system cannot be long continued without injury to the animal.

4751. Now will you tell me how I could produce more milk and consequently more butter from my dairy of cows ?—Of course that depends just upon how you feed them at present ; for instance, the London cowkeepers generally feed freely upon oil cake, upon barley flour, or something of that kind, and upon grains and wurzel and hay. I think that those things given freely do decidedly produce a larger quantity of milk, and without deterioration of the quality of the milk.

4752. Is it not your interest to produce a larger quantity of milk rather than regard the quality of it ? —No ; that has its limit. If our milk was below a certain quality it would not give satisfaction.

4753. But your object is to produce milk rather than butter or cream, of course ?—You probably know

that in certain localities there is a very large demand for cream; for instance, at the West End.

4754. Does not that cream mostly come from the country?—There is very much produced in London as well. There is a good deal that comes from the country.

4755. More cream in proportion than milk comes from the country, does it not?—Not now; that used to be the case, but it is so no longer. Of course there is but little cream required comparatively in London at the present time. The chief demand for cream is from something like April or May to the end of the season. At other times there is not a very large demand.

4756. Previous to the Plague there was more cream from the country in proportion to the milk, I suppose, than from London?—Yes.

4757. (*Dr. Quain.*) How many cows had you in your establishment immediately before the Plague? What was your usual average?—My usual average was about 40; but that was just at the end of the season, consequently I had reduced my stock then to 32.

4758. Have you had the disease among your stock?—I have.

4759. What is the number of your stock now?—Two.

4760. Have you thought of replacing those you have lost?—No, I have not.

4761. Do you think of replacing them again?—I do not think it is likely that I shall.

4762. If the trade in cows and cattle were suspended by Government for three months, and people were prevented from moving cattle, would that be a great hardship to the London cowkeepers?—I believe it would.

4763. I say for the next three months?—Yes. I do not mean so much for their buying as for the interruption that it would give to those by whom the supply of milk is kept up.

4764. If you were prevented from buying cattle, and bringing them up to replace your losses, for the next three months, would that be a very serious hardship? I speak of London only now?—Perhaps not very great. I am scarcely prepared, however, to answer the question.

4765. Were you present at a meeting of cowkeepers held at Chelsea lately?—I was.

4766. Did you agree with the opinions expressed there?—Yes; I was one of the speakers.

4767. Do you differ from those opinions now?—No; perhaps we do not properly understand your recommendation. If you merely recommend the suspension of the trade in London, that is one thing; but if you recommended a general suspension of the trade throughout the country, which we understood, that is a very different thing.

4768. How would the general suspension of the trade throughout the country affect you?—Most seriously, by its effect upon those who are now supplying us; for instance, I am supplied principally by a farmer at Petersfield, who is supplying not only myself but several others. Now, in order that he may keep up the quantity of milk which we require, he must be buying cows not only monthly but every week, and consequently, if you stop him, you affect us, because if he does not get his quantity of milk of course he cannot give us ours.

4769. Could not those cows supply the milk to other persons, so that you would get it from other sources than those from which you are now supplied?—You must remember that the more sources we are supplied from the greater the expense involved; and there is another thing to be considered; we do not so much care about having milk from strangers, because, unless they have been somewhat accustomed to the business, the probability is that they will send it sour.

4770. Then it is merely a matter of inconvenience to some extent, and that for a limited time; there would be no serious difficulty?—I believe that that inconvenience would be so great as to present a serious difficulty to us. You will understand that if we are not able to supply our customers with the quantity they require they are generally indisposed to make very many inquiries upon the subject. They go elsewhere if they see that they can be better supplied.

4771. If the Plague were allowed to continue amongst the cattle, in consequence of this movement of stock, would it not be a still greater embarrassment and a greater inconvenience to you and other cowkeepers?—If what you have suggested were the only means by which the Plague could be arrested, I admit that it would be the smaller evil of the two; but I think for one thing that any such regulation would be to a very great extent inoperative, because it would be so much evaded.

4772. Do you think that it would be evaded if it were said that no cattle whatever should be moved?—I do.

4773. How could it be evaded; it would be a general prohibition against moving cattle?—I am afraid it would be found that it could be evaded.

4774. Has any method suggested itself to your mind by which the progress of the Plague could be arrested?—My own opinion is that more ought to be attempted in the way of treatment.

4775. Would not the present be a more convenient time than any other to get rid of the cowsheds from London?—I think it would while they are so empty. I admit that. I do not deny it for a moment.

4776. (*Chairman.*) Does your association insure the cows belonging to the cowkeepers?—No; they do not.

4777. Do you know of many cases in which your friends having cowsheds in London have escaped the disease?—I know of some cases; several cases indeed.

4778. Can you trace any reason for their immunity from the disease?—I cannot at all. I am utterly at a loss.

4779. Have they bought in the market like their neighbours?—I believe so.

4780. You have not made that a special subject of inquiry?—I know they have had fresh cows in.

4781. Within the last few weeks have you had any meeting of your association to discuss these points?—We have not.

4782. The answers that you have given, therefore, do not represent the views of your association?—No; they do not; they are purely personal.

4783. Is there anything that you wish particularly to draw our attention to?—I think not.

The witness withdrew.

Adjourned.

Thursday, 7th December 1865.

PRESENT :

Earl Spencer.	Dr. Quain.
Viscount Cranborne.	Dr. Parkes.
Mr. Lowe.	Mr. Ceely.
Mr. Read.	Professor Spooner.

EARL SPENCER IN THE CHAIR.

EDWARD HOLLAND, ESQ., M.P. examined.

E. Holland, Esq., M.P.

7 Dec. 1865.

4784. (*Chairman.*) I believe you have taken considerable interest in the diseases of cattle ?—I have.

4785. Will you state what reasons you had for introducing a Bill in the year 1863 on the subject?—Perhaps you will allow me to read an extract from a paper which I produced at Edinburgh in 1863 before the Social Science Meeting. I have read it over since I received your summons, and I am still of the same opinion that is expressed there. Perhaps that paper will explain my opinion most satisfactorily. I will only read a portion of it. "I believe that much "good would ensue from the appointment of an "Inspector General of live stock traffic throughout "the United Kingdom. His duties should be to "collect trustworthy information as to the health of "stock, whether imported from abroad or circulating "in the home trade. He would have to keep himself "in communication with the different inspectors of "towns, fairs, and markets throughout the country; "to visit different localities; to give attention to the "reports of outbreaks of disease, and more especially "to the spread of contagious disorders in all countries "from which importations are made to this. It would "be the duty of such an inspector to investigate "special outbreaks of disease, with a view to determine "the causes producing them, and he could suggest to "the Privy Council proper measures to arrest the "progress of such disease; and whilst in communi-"cation with local inspectors, and adopting with them "special precautionary measures against the propagation "of disease should it appear in any district, he would "report to the Privy Council what steps ought to be "taken on the occasion. Besides, he should report "annually on the diseases of animals in the United "Kingdom. Such a report would enlighten farmers "as to the best means of protecting their stock in "health, and would directly lead to a great diminution "in the traffic of diseased animals. But here exists "another difficulty: Who are to be the inspectors? "Are they to be, as they too frequently are, at present, "unqualified men for the office, chosen frequently "through corporate interest rather than on account of their veterinary knowledge; or are they to be well-educated, scientific, veterinary practitioners? Indubitably they ought to be the latter; but where are "these to be found? My belief is that from the want "of a high grade of education amongst professional men "the farmer has taken up the impression that medical "treatment could do nothing for him; that spending "money in attempting to cure his diseased animals was "a farce; and hence he has had further inducement "to send his sick animals to market whilst life was "still in them. Had there been in existence a sufficient number of well-qualified veterinary practitioners "he would have acted otherwise, and not have incurred such serious losses as he has done through "the dissemination of contagious and infectious "diseases. Statistical returns up to the present "time" (this is dated in 1863) "show that the number "of members of the Royal College in practice in the "United Kingdom is only 1,018, whilst the number "of those who assume the title of veterinary surgeon "is 1,244, and those practising as farriers 1,109, "The number, 1,244, who unscrupulously assume the "title of veterinary surgeons, which the possession "of the diploma alone ought to confer, affords a "striking proof that the profession requires legislative support. It is expedient that persons requiring "veterinary medical aid should be enabled to distinguish the qualified from the unqualified practitioner, and it is a gratification to know that a "measure is to be brought next session before Parliament, having for its object the punishment of such "persons as shall wilfully or falsely take or use the "name of veterinary surgeon, and practise under that "title without being duly qualified to assume it. At "the same time the framers of this Bill have taken "care that it shall not be retrograde in its action; "and that its provisions shall not affect any persons "actually practising as veterinary surgeons previously "to October 1864." I have here a copy of the intended measure which I was then about to bring into Parliament. I could not bring it forward, however, as I had no chance of being successful with it; and in the Bill which I have here now the word 1866 is introduced. "Upon a more perfect system of inspection, "both at our ports and in our markets, and upon a "wider spread of scientific professional knowledge, do "I rely for improvement in the quality of food supplied "to consumers, for a diminution of sickness and death "arising from the consumption of diseased meat and "milk; and further, to the same sources, do I look for "a diminution of the immense losses incurred by "farmers and graziers through slaughtering for food "instead of attempting to cure their diseased animals." This paper was read before the Section of Health at the Social Science Meeting at Edinburgh. It was more in connexion with diseased meat that the question was brought forward than anything else. I then attempted to introduce a Bill in the next session, called "The Cattle, Sheep, &c. Contagious Diseases Prevention Bill." Sir William Miles joined me in bringing it forward, and our names are on the back of the Bill. In this Bill we tried to introduce a clause with regard to the inspection providing that the Privy Council should appoint an Inspector General. His powers and duties are stated in accordance more or less with what I have read. He is to be subject to the Orders of the Privy Council; and there are certain penalties and so forth connected with preventing him or interrupting him in the discharge of his duties. That Bill I was obliged to withdraw; but I only withdrew it after Government had promised to bring the question forward the following year, which they did. I have here the Bill which was brought forward in the following year. It was prepared by Mr. Bruce and Sir George Grey. It is called "The Cattle Diseases Prevention Bill;" but even Government, with all their strength, were obliged to withdraw it, after a very long sitting in Committee. I have a copy of the Bill, which I can leave with you, if you wish it; and I have also brought the proposed Bill for the improvement of the position of the veterinary surgeons. The clauses of that Bill are, first of all the short title, then the commencement of the Act, and then a penalty for falsely using the title of veterinary surgeon; then the exemption of all persons in practice prior to the 1st of October 1864; and recovery of the penalty. I have now prepared something of the same kind to bring forward in the next Parliament. It will be a Bill to the same effect, only exempting all persons in practice prior to the 1st of October 1866; the clause running thus:—"Provided nevertheless, that this Act shall not affect "any person who shall prior to the 1st day of "October 1866 have assumed the name or title of "veterinary surgeon, and at the period last-mentioned shall be actually in practice as such." The

object of the Act is, that "any person, not being a "member of the said Royal College of Veterinary "Surgeons, who shall after the time appointed for "this Act coming into operation take or use the "name or title of veterinary surgeon, or who shall "falsely represent himself to be a member of the said "college, or who shall use any other name or title, "with intent to lead or whereby the public may be "led to believe that he is a member of the said "Royal College of Veterinary Surgeons, shall upon "a summary conviction for any and every such "offence pay a sum not exceeding 10*l.* nor less than "5*l.*"

4786. At the present moment there is no penalty for an unauthorized person practising the veterinary science?—I am not aware of any. There certainly is none for practising.

4787. (*Mr. Lowe.*) Nor is there any in medicine for practising upon human beings, is there?—I was not aware of that; I thought there was.

4788. (*Professor Spooner.*) I have no doubt you are well acquainted with the nature of the charter granted to the Royal College of Veterinary Surgeons in 1844?—Yes; I have it here.

4789. Will you have the kindness to read the preamble of that charter wherein it sets forth that all persons who have undergone a certain examination shall be entitled, exclusive of all others, to call themselves veterinary surgeons?—This charter recognizes the veterinary art to be a profession. The words are these:—"And we do further declare and grant that "the veterinary art as practised by the members of "the said body politic and corporate shall be hence-"forth deemed and taken to be and recognized as a "profession, and that the members of the said body "politic and corporate, solely and exclusively of all "other persons whomsoever, shall be deemed and "taken and recognized to be members of the said pro-"fession, or professors of the said art, and shall be "individually known and distinguished by the name "or title of veterinary surgeons."

4790. There is no penalty of course upon that?—No; there could not be.

4791. (*Chairman.*) In improving the law with regard to contagious diseases among cattle, what would you rely upon besides improving the veterinary science of England?—At present there is no confidence whatever in a veterinary surgeon, because he is so frequently an uneducated man that we have nothing to rely upon.

4792. In your Bill you propose some new clauses with regard to the removal of infected animals, and with regard to markets where animals are exposed, I believe?—Yes; I rely upon the inspectors for that. I may state that the inspectors have very much improved during the last two years. When Government found that they could do nothing with this measure that I have spoken of they strengthened their hands by making an alteration in the Nuisances Removal Act, which rendered the clauses referring to markets more stringent.

4793. Do you think that that has been sufficient?—No, it has not been sufficient; because, although a great many of the inspectors are very much improved, and are very good men, yet there are others that are the mere creatures of the corporations.

4794. What new system of education would you propose to institute in order to improve the class of veterinary surgeons?—They might take advantage of the present education. They might be required to take a degree, and then they would become educated men, which at present they are not.

4795. Then you would not permit any person to practise the veterinary science without having a licence from certain named colleges?—I should say without having taken a degree.

4796. Where would he have to take his degree, according to your proposal?—At the colleges which are at present established.

4797. At the existing colleges?—Yes.

4798. You consider that the education given at the existing colleges is satisfactory?—Yes; our best veterinary surgeons come from those colleges. Certainly they may be improved.

4799. And, as far as inspection goes, wherever an inspector is employed who has been educated at one of these colleges, do you consider that satisfactory?—It does not always follow that he has been educated at one of these colleges. He is not always a veterinary surgeon.

4800. When the inspector is a veterinary surgeon who has been educated at one of these colleges, do you consider that the inspection is satisfactory?—Yes, certainly.

4801. You consider that the examination which it is necessary to pass in order to become a member of the college is satisfactory?—Yes; on the whole. It might be improved very much; it is improving now.

4802. Then your great object would be to prevent people practising who have not received an education at one of these colleges?—Yes; exactly.

4803. At present then you do not consider that there is a sufficient supply of these qualified veterinary surgeons?—Certainly not. I forget at this moment where I got these figures which I stated in 1863, but I see it is from some statistical return; however, those figures show what a great number there are who are not qualified men.

4804. (*Professor Spooner.*) When in answer to the noble chairman you say that you would prevent all persons from practising the veterinary art who are not members of the existing colleges, I apprehend that you mean that you would prevent their practising under the title of veterinary surgeons, they not being entitled to call themselves so?—If it so happened that there was a great demand for veterinary surgeons, and if another college was established, if that college had its charter from Government as well as the existing colleges, and if it were a duly established college, I do not see why it should not give degrees likewise. I do not confine myself to the existing colleges.

4805. But you do not mean to say that you would prevent any persons from treating the lower animals, although they may not have studied at either of those colleges, presuming they did so under some other title, such as "cow leech" or "farrier;" what you mean is that they shall not assume the title of veterinary surgeons; is not that the case?—I mean that each man should have a diploma.

4806. Do you mean to say that it should be penal on the part of any man to practise in the treatment of the disease of the lower animals not having a diploma?—I think it ought to be so.

4807. That would be carrying it to a much greater extent than the veterinary surgeons anticipate, would it not?—What we want is, a well-educated professional class of men to attend to our cattle and horses.

4808. Is not what the veterinary profession requires this, that no persons practising on the treatment of the lower animals shall assume the title of veterinary surgeon if they have not been educated at one of the recognized schools?—Yes.

4809. You do not think for a moment that Parliament would pass a bill to prevent persons from practising upon the lower animals without such diploma, if the public thought proper to employ them?—Our great object is to get well qualified and professionally educated men.

4810. Is it not the object of the agriculturists to guard against imposition?—Yes.

4811. That is to say, to guard against imposition by a person assuming a title for which he is not qualified?—Certainly it is.

4812. That is the object of the Bill of which you have spoken?—Yes.

4113. But the object is not actually to prevent any man from practising?—No; that clause that I read to you is to the effect that "any person, not being a "member of the said Royal College of Veterinary "Surgeons, who shall, after the time appointed for this "Act coming into operation, take or use the name or "title of veterinary surgeon, or who shall falsely re-

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"present himself to be a member of the said college, "or who shall use any other name or title, with intent "to lead or whereby the public may be led to believe "that he is a member of the said Royal College of "Veterinary Surgeons, shall upon a summary con- "viction for any and every such offence pay" such and such a sum.

4814. That is for assuming the title of veterinary surgeon?—Yes; and then the 4th clause of this Bill is introduced because there are a great many persons who are in practice now calling themselves by some title, making the public believe that they are veterinary surgeons by education. The clause runs thus:—"Pro- "vided nevertheless, that this Act shall not affect any "person who shall prior to the 1st day of October "1866 have assumed the name or title of veterinary "surgeon, and at the period last mentioned shall be "actually in practice as such."

4815. Then do you think that such a Bill as that would effect the object that the veterinary surgeons have in view, that is, to prevent persons practising as veterinary surgeons, and calling themselves veterinary surgeons, who really are not so?—I think it would improve the state of things very much.

4816. Would it not give an opportunity to any man, whoever he may be, to set up with the name of veterinary surgeon prior to the Bill being passed, presuming that it is passed?—That would be just as he does now.

4817. I will take the case of all my grooms at the college, prior to the Bill passing, knowing that such a Bill was likely to be obtained, might they not all of them put over their doors "veterinary surgeon," and still continue to practise under that title as far as the proposed Bill is concerned?—Yes.

4818. Do you not think that in the event of such a Bill being obtained it would be right that it should apply to all such persons as have assumed the title of veterinary surgeon since the obtaining of the charter of 1844, because the charter distinctly sets forth that persons who have been educated at such and such schools, and passed through such and such colleges, shall be, exclusive of all others, entitled to the use of that name?—Yes; but I think that by this measure we meet all those cases of men who have not been educated in that way, and who nevertheless assume this title.

4819. You do not think then that the Bill which you say you are about to introduce into Parliament ought to apply to those parties who have assumed the title without having been to any of the colleges?—I think it does apply to them.

4820. You do not think that it should apply to any of those parties, though they may have assumed the title subsequently to the granting of the charter?—I think it applies to all who have not got a diploma.

4821. It would only apply to those who shall have entered the profession after the obtaining of the Bill; it would give to the whole community, up to the year 1866, the right of calling themselves veterinary surgeons, and of practising under that title?—If all those persons who have not been educated at the colleges were to cease to practise at once we should have very few veterinary surgeons left in the country.

4822. Do you not take a misconception of the views of the veterinary profession upon that point? The veterinary profession by their bill do not seek to prevent the practice of those men; all they seek is to prevent their practising under the title of "veterinary surgeon"?—That is the meaning of my Bill, particularly of that clause which I read; it relates to the practising under the name of veterinary surgeon.

4823. But it is not consistent with your replies to the noble chairman, as I understood them. I gathered from your answers that the object of the Bill is to prevent such parties from practising?—From practising under the name of "veterinary surgeon." The clause that I read just now was directed to that object.

4824. Do you not think that it would be better to apply to Parliament for the prevention of parties using that title who have assumed it since the obtaining of the charter?—There can be no objection to that. It is, however, a long time since the charter was obtained. The date of the charter was 1844.

4825. Do you think that in such a case the Bill would be considered retrospective in its action, inasmuch as the charter, although it does not impose a penalty, says that the Queen grants a certain privilege; that is, that certain persons who have undergone such and such an education shall, exclusively of all others, be entitled to call themselves "veterinary surgeons?—It might. I can hardly say.

4826. (*Viscount Cranborne.*) To avoid any misunderstanding, let me ask you what the meaning of that part of the Bill is which inflicts a penalty for doing anything whereby the public may be led to believe that a person belongs to a veterinary college. Do you mean thereby to prevent the assumption of such a title as "cattle doctor"?—No, not at all. A "Member of "the Royal College of Veterinary Surgeons," I think, is the title.

4827. What could a man do to induce the public to believe that he was a member of the Royal College of Veterinary Surgeons, unless he brought himself within the mischief of the other part of the Bill which forbids his calling himself by that name?—He gets employment by the public under the impression that he is a professionally educated man.

4828. What is the precise act against which that clause of the Bill is levelled? What is it precisely which you wish to prevent when you forbid a man to do anything whereby he may be thought to be a veterinary surgeon?—I only want him to have had an education, and to have given a proof of it by obtaining a diploma. At present, a very ignorant man passes as a member of the Royal College of Veterinary Surgeons without having received any of the education at all, and he comes and doctors our animals.

4829. Do you wish to prevent that?—Certainly; I wish to prevent that.

4830. Do you really adhere to that answer, that you wish to prevent an ignorant man doctoring my animals if I wish to have an ignorant man to doctor them?—It is a very great pity if he does doctor them.

4831. I think you must have misapprehended my point. Do you really mean to say that the object of your Bill and the object of the veterinary profession is to prevent ignorant men from acting as doctors of cattle, if people choose to employ them, knowing them to be such?—That is not the object of the Bill. The object of the Bill is to raise the professional status of the veterinary surgeons.

4832. (*Professor Spooner.*) Would not your answer to the question of the noble Viscount, as to the Act rendering a person liable to a penalty, rather be, that all persons would render themselves liable to the penalty who practise upon animals, calling themselves "Veterinary Surgeons," or placing over their doors the title of "Veterinary Surgeon"?—Yes.

4833. Thereby leading the public to suppose that they are veterinary surgeons, when in reality they are not; that would be your answer, would it not?—Yes; that would do as well as what I have already given as the answer.

4834. (*Chairman.*) You considered the Act for the prevention of infectious diseases which was brought in in 1864, did you not?—Yes; the one that was brought in by Government.

4835. Did you bring in a Bill in 1864 yourself?—I brought in a Bill in 1863.

4836. And in that year you withdrew your Bill?—Yes.

4837. But in 1864 there was a Bill proposed and brought in by Government?—There was a Bill brought in by the Government, but they subsequently withdrew that Bill.

4838. What were the particular alterations which they wished to introduce by that Bill into the present system?—The Bill was divided into three parts; the first part related to the general law as to diseased cattle, namely, with regard to the public exposure of diseased cattle and the sale of diseased cattle; the

second part contained special provisions against epidemics in cattle, and provided, first, that special regulations should be made by Order in Council as to cattle; it provided for the application of the Order, and the penalty for disobedience; then for the Orders in Council to be published in the Gazette and county newspapers, and for the Orders in Council to be laid before Parliament, and with regard to obstructing persons carrying into effect the Orders in Council; the third part had reference to the carriage of cattle by railway and otherwise. The first clause in it related to the cleansing of the trucks, and the next to the watering of the cattle on long journeys; and the next clause gives permission to the carriers to refuse to carry diseased cattle.

4839. With regard to the first part of the Bill, do you think that the present regulations with respect to the exposure of animals in the markets, and so forth, are satisfactory?—I think that if this Bill had passed it would have improved the state of things upon each of those points very much.

4840. It would have increased the permanent powers of the inspectors of markets, would it not?—Yes; very much.

4841. Do you consider it practicable to have an inspection of all these markets permanently?—I think it might eventually be permanent. I do not suppose that the inspectors whom we have introduced at this time during the prevalence of the Cattle Plague will be altogether dropped.

4842. You think that it would be desirable in ordinary times, when there is no special disease calling for particular measures in the country, to carry on the inspection as a permanent thing?—That is my impression.

4843. Would it be practicable to inspect a market like the Falkirk Tryst?—It would be very difficult to do it. We were told in committee that it would be impossible to do it; we had evidence to that effect.

4844. You would not be in favour of introducing in a new measure an inspection such as that?—Whatever new measure is brought in must be brought in by Government.

4845. Would your own opinion now be opposed to the inspection of markets of that sort?—It would be impracticable, I am afraid, at Falkirk.

4846. Then if we pass over the special powers in cases of epidemics breaking out, and come to the third part of the Bill, which refers to the conveying of stock by railway, steamboat, or otherwise, do you consider that the present state of things is very unsatisfactory?—Yes; I think it might be amended.

4847. Will you state how you think it is unsatisfactory?—I think the proposal in this Bill was a very satisfactory one.

4848. Do you consider that the conveyance of stock by railway is very badly managed at the present time?—Yes, certainly.

4849. Would you state in what way you consider it unsatisfactory?—From the long time that the cattle are kept without water when they come up from Scotland, for instance, to London; and then again it is unsatisfactory from the way in which they are shunted and injured by pressure against one another, or by being thrown down in the truck and trodden upon.

4850. What is your opinion with regard to the state of the steamboat carriage?—It is pretty much the same. But I may state that the steamboat carriage is very much improved of late.

4851. Will you state generally, without reading particularly the clause, how you would like to regulate the railroad traffic?—I should regulate it in the way in which it is arranged in this Bill of last year.

4852. That is by clause 12, is it not?—Yes; that section refers to the cleaning of trucks; that is done almost all over the country, I believe, at this moment.

4853. But in ordinary times do you consider that the trucks are in a very filthy state?—I know more of the conveyance by the Midland than on any other line, and certainly their trucks are being attended to now. I believe they have actual inspectors of their own to travel up and down the line, to see that the trucks are prepared after each journey for fresh cattle.

4854. You are speaking now of the present time?—Yes; that is what they are doing at this moment. They have commenced that system; but I do not believe that they will ever leave it off again. That is one of the best arranged lines, I think.

4855. Do you consider that the steamboats are very much crowded?—They have very much improved also.

4856. You would wish that regulations for all those matters should be framed by an Act of Parliament?—Yes, certainly.

4857. And you would have them in constant operation?—Yes; they should be in constant operation. The watering of the cattle is of great importance. I may state that there are two or three inventions for effecting the object; I think there is a patent taken out for one of them. The trough is to be placed alongside the truck without taking the cattle out of the truck; the truck being so formed that the cattle can reach the trough, and drink without being unloaded.

4858. (*Mr. Read.*) Who opposed the Bill when it was before Parliament?—The graziers and the butchers and the salesmen; all Ireland and almost all Scotland. All those influences were brought to bear.

4859. Were there not some very stringent clauses in it with regard to the foot-and-mouth disease?—Yes.

4860. And those clauses excited considerable opposition, did they not?—Very great.

4861. They were struck out before the Bill was abandoned?—Yes; there were a great many alterations made in the Bill during its progress.

4862. With regard to the importation of cattle, would you have inspectors appointed at the ports of embarkation?—Most decidedly; but even then it would be a very difficult thing to prevent cattle from coming into the country after having been in contact with cattle which had been thrown overboard, because they had fallen victims to disease. I heard yesterday a remarkable fact with reference to the conveyance by steamboat from Hamburg. A gentleman from Northumberland told us that it was not one occurrence only, but the practice, that if any cattle are taken ill on the passage on board a vessel coming from Hamburg they are thrown overboard; so that when the vessel arrives at the port of discharge to which she is destined that part of the cargo which is left is inspected, and found to be in a healthy state; but it is not mentioned then that there were other cattle on board with whom those apparently healthy cattle had been in contact during the voyage.

4863. Do you not think that it would be advisable to have a sort of bill of lading of the number of cattle that are embarked, and to require an account to be given of those that are missing?—Certainly; that might do something. I may say that I have just come from Lord Granville. I accompanied a deputation of the Royal Agricultural Society's Council. We met to the number of about 40 in Council yesterday, and we were unanimous with regard to certain resolutions which we adopted, and which are very stringent. We have placed them before Lord Granville to-day. One of them relates to the importation of cattle. Those 40 gentlemen might be said to represent a large proportion of the agriculturists of England, for they come from different parts of the country. "It is submitted that all foreign cattle, sheep, and "pigs should be slaughtered at the port of disem- "barkation, and their skins disinfected forthwith. "But in case this should be considered too strin- "gent a proceeding, then the owner or consignee of "any imported cattle, sheep, or pigs, or his agent, "shall be obliged to state on their arrival in port to "what town or place he intends to forward them. "After being duly inspected, and certified to be free "from disease, they shall be marked with a special "brand, and be allowed to proceed, and shall be

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"slaughtered at such town or place," and not be permitted to leave it again.

4864. Would it be advisable in your opinion that certain restrictions should be placed upon the number of cattle that are conveyed in trucks? Are not the cattle in the trucks very often overcrowded on the railways?—Very often indeed.

4865. Until lately that was a very common occurrence, I believe, in ships?—Yes; the more they could get in the less they had to pay.

4866. The chief opposition to the Bills before Parliament was directed, was it not, to that part which related to diseases rather than to that which related to importation of cattle?—No; it was against the inspection.

4867. The inspection where?—In the country. The opponents of the Bill did not like the idea of an organized inspection.

4868. What I meant to ask was this: the opposition was directed chiefly against the Cattle Diseases Bill rather than against the Cattle Importation Bill; was not that so, according to your recollection?—Yes, it was.

4869. (*Professor Spooner.*) No doubt you have given your attention to the construction of trucks for the conveyance of cattle on railways?—Yes.

4870. Is it your opinion that any decided improvement might be made in them?—An improvement might be made in the buffers, certainly. On many of the railways they are now improving them, because the loss is so great; when the animals arrive at their destination they are obliged to be killed immediately, they are so bruised. But if the buffers had a better kind of spring attached to them it would make a very great difference to the cattle.

4871. As regards the body of the vehicle, do you not think that it might be so constructed as that the animals might stand side by side with their heads projecting outwards, instead of being all turned into a common open body of a truck?—That was part of the arrangement when it was contemplated to supply them with water. I think it was intended that they should be so placed that each animal should have its head in such a position as to get at the water trough.

4872. That could only be effected by a partition in the trucks which does not now exist?—It would require a peculiar arrangement of the animals in the truck. At present they are not arranged at all.

4873. Am I to understand that it is your opinion that it is advisable that that should be done?—Most decidedly.

4874. (*Chairman.*) Is there anything else which you would wish to bring before the Commission?—I am not aware of anything.

The witness withdrew.

EDWARD BALLARD, Esq., M.D., and Mr. ROBERT MURRAY, examined.

E. Ballard, Esq., M.D., and Mr. R. Murray.

4875. (*Chairman.*) (*To Dr. Ballard.*) I believe you are medical officer of health for the parish of St Mary's, Islington?—Yes.

4876. (*To Mr. Murray.*) Will you state whether you hold any position which has brought you into contact with cows suffering from the cattle disease?—I am the inspector for Islington.

4877. Are you a veterinary surgeon?—I am.

4878. (*To Dr. Ballard.*) The disease broke out very early in your district, did it not?—It did.

4879. Can you give us any views with regard to the origin of the disease in your district?—I can tell you all that I know of it. I made some memoranda about it. The first cases of the disease were at the shed of Mrs. Nicholls in the Liverpool Road. She purchased six new cows, according to the information I received some time after the outbreak. The first case occurred about the 27th of June, but the first that I heard of it was on the 27th or 28th of July.

4880. You are not aware of any earlier case than that of Mrs. Nicholls?—No; that was the first case.

4881. Has the disease extended very largely in your district?—It has. Up to the present time the total number of cases which have come to my knowledge are 694, or thereabouts. Of course one cannot tell precisely. That list goes up to the end of November. I have kept a record month by month, or nearly so.

4882. What does that number 694 represent?—There have been 694 cases of animals suffering from the disease. The number of deaths has been 611. When I say deaths, I ought to add, that it is difficult to distinguish between those that died and those that were slaughtered on account of the disease; but taking the two together 611 is the number which I have.

4883. Have you formed any opinion as to the origin of the disease?—I have, as regards Mrs. Nicholls's shed. What I heard from Mrs. Nicholls was that six cows were brought into the shed, or rather into a quarantine shed about a week before the outbreak, from the Cattle Market; that those cows, six in number, were attacked on the 27th of June, and that they all died.

4884. (*Professor Spooner.*) Were they English or foreign cows?—I cannot tell you. They were taken into the quarantine shed, and died; and then the disease crossed a yard about 50 or 60 feet wide into the principal shed where about 80 cows were kept. The yard between the two sheds is one in which the dung is stored from both sheds, and the same person, I was informed, attended to the quarantine shed as to the principal shed.

4885. (*Chairman.*) Then, without going particularly into that case, which we have had rather in detail before, will you state whether you believe the cause of the disease in that shed to have been the state of the shed, or do you believe it to have been introduced?—It was certainly not the state of the shed. It is one of the best sheds in my parish for cleanliness and arrangement.

4886. You believe then that it was introduced by those animals which were bought in the public market?—I do.

4887. Will the same cause account for the breaking out of the disease in many other sheds in your district?—Yes; it can be accounted for by the introduction of cows. I have some account of the origin of the disease in some of the earliest sheds that were attacked. The second shed that was attacked in my parish was Mr. Dennison's, which is the nearest shed to Mrs. Nicholls's. It also is a very excellent shed; it is a new shed, and well arranged, and kept very clean. Mr. Dennison's shed was attacked about the beginning of July, that is to say, he lost four cows on the 10th of July. Those were the first animals that he lost. The third shed or thereabouts that was attacked belonged to a person of the name of Liddiard in Hale Street; it was not actually the third shed that was attacked, however. I think Wingrove's in Queen Street was the third. In Liddiard's case it appears that he had received some three cows, towards the end of July, from a shed that was infected belonging to a man of the name of Wingrove.

4888. (*Dr. Parkes.*) Then his case comes from Wingrove's?—Yes. Mr. Liddiard's shed was affected, and he lost 13 cows between the 27th of July and the 1st of August. That was the beginning of it, as I have been informed, in Mr. Liddiard's case. Then the next was Thurtle and Harvey's, which is the largest shed in my district; I believe it is Harvey's now. That firm used to have on the average 400 cows, and they had been in the habit of continually purchasing from the market. I believe the first cases at Harvey's took place on the 5th of August, when two cows were taken ill in a new shed. Harvey has two sets of sheds; one, a very fine, new, well-ventilated large shed, and the other a very old set of sheds, and not particularly well kept; but the disease broke out in his new shed, not in his old ones. He is continually buying fresh stock.

4889. (*Chairman.*) What loss had he?—It is difficult to tell the precise numbers. Mr. Harvey is

stated to have had about 200 cases of disease, and he is said to have lost 168 animals; but then he sent a great many to market. I know a great many that went to Atcheler's for slaughter.

4890. Have you remarked whether amongst those that remain in the shed there is a great proportion of Dutch cows?—A good many that I have seen are Dutch. I think the Dutch form the majority in our sheds; but Mr. Murray will be able to say that better than I can.

Mr. Murray.—The Dutch cows were those that were left.

4891. (*To Dr. Ballard.*) The Dutch cows seem to recover more from the disease than the English cows?—I have not observed that.

4892. (*To Mr. Murray.*) Do you not think that that is the case?—I imagine that the majority of Mr. Harvey's cows were Dutch, so that I can draw no conclusion from Mr. Harvey's case.

4893. (*To Dr. Ballard.*) What was the next case in your district?—It was in Wingrove's shed, in Elmore Street. On the 20th of July he found two cows which he had bought the week before, poorly, and therefore he sent them to the market. That is the account we have of it. On the 27th he bought five new cows, and the disease appeared on the 7th or 8th of August. This outbreak seems to be connected with the introduction of the new cows into the sheds. Those were all the early cases. Of course one can only trace the origin of the disease in the early cases; in the later ones it is difficult to trace it. As regards sheds situated in the same yard, there are two persons called Huckett and Grant, who occupy sheds in the same yard at Ball's Pond; they use the same cistern and dung pit. Mr. Huckett brought a fresh cow into his shed, which was poorly when it came in, and shortly afterwards the disease broke out in that shed. A person called Rance has two sheds at a distance of about a quarter of a mile apart; he is the owner of both of them. The disease broke out in his two sheds about the same time, or within a short period of one another. Two other persons have their sheds in one and the same yard; one of the name of Pym; the other the firm of Pecket and Lowther. In that case the disease broke out about the same time in the two sheds in the same yard. They use the same water supply, and have the same dung pit. A person called Vicary has recently been attacked; he had five or six new cows in just before the outbreak in his shed. Most of those were early cases; but Vicary's is a late case. I may state that full inquiries have been made into all of these cases. My impression is, from negative facts as well as from these positive ones, that the disease was connected with the introduction of the new cows into sheds in each of the instances when this is stated to have happened.

4894. You have stated a good many cases where the disease has been introduced by the purchase of new stock; do you know many cases where there has been an exemption from disease?—I can tell you which sheds have been exempt in my parish.

4895. Are there a great number that have been exempted?—No; the majority have been attacked.

4896. (*Mr. Read.*) The great majority?—The great majority have been attacked. I can tell you the number.

4897. (*Chairman.*) Without specifying them, perhaps you can give us the numbers of those that have been attacked and those that have escaped?—Up to the present time there are 21 sheds in my parish which have not been attacked; 47 have been attacked up to the present time, or, rather, up to the 30th of November.

4898. Has there been any different system pursued by the owners of those 21 sheds which escaped from that pursued by the owners of the 47 sheds that were attacked?—If you mean by way of prevention, there was none.

4899. Have they purchased in the market?—I cannot answer that question. I do not know.

4900. You do not know two cases within a short distance of Thurtle and Harvey's place, one called the Richmond Dairy, and the other on Haverstock Hill?—I do not know them by the names of the places. I have the names of the owners only.

4901. Do you know the case of Mr. King, in Hemingford Road?—No; but Mr. Murray will very likely be able to give information about that.

4902. (*To Mr. Murray.*) Do you know that case?—I am not aware that Mr. King has had any disease.

4903. Do you know what precautions he has taken?—He has been very attentive, generally, to his cows, and uses disinfectants a good deal.

4904. And he has not purchased in the market, has he?—He purchased one cow lately, but not in the market; at least that is his own statement.

4905. Have you been into his shed?—I have.

4906. (*To Dr. Ballard.*) Do you consider that the state of the dairies has improved of late years?—Undoubtedly it has in my parish.

4907. What has caused that improvement?—I think the legislation on the subject of the licensing of the sheds.

4908. Do you think, therefore, that it is less likely that a disease should have been generated in those cowsheds in their improved state than before this Act was passed?—I cannot say anything about that, because I am not satisfied that the cleanliness of the shed has very much, if anything, to do with the outbreak of the disease.

4909. The sheds are, however, in a cleaner state?—They are in a cleaner state, certainly. I may state that some of the sheds where the disease first broke out were some of the cleanest in my parish. Mrs. Nicholls's is one instance, Dennison's is another. Wingrove's, Huckett's, Grant's, Rance's, and Harvey's new shed, are all some of the best sheds in my parish, and yet they are sheds where the disease earliest broke out; whereas some of the worst sheds, I may mention especially those of Webb and Humphreys and Cook, are amongst those that have been attacked quite lately.

4910. Do you believe that the disease could have existed in any sheds long before it came to your knowledge?—Not lately. I am certain that it has not done so lately, because Mr. Murray and another inspector whom we have had visiting the sheds must have known of any case.

4911. Do you think that it could have been so at the commencement of the outbreak?—From the middle of August, when Mr. Murray was appointed, we must have known of every outbreak directly it occurred.

4912. My question rather refers to what took place before that time?—Then I should not have known of it, certainly; in fact the cowkeepers kept it secret as long as they could.

4913. Have you anything to state with reference to the disposal of the carcases?—Yes; I can tell you what carcases were disposed of at Belle Isle. I can only give an account of those, because Belle Isle alone is in my parish.

4914. What is Belle Isle?—Belle Isle is a district in my parish where the cows are destroyed. The total number received at Belle Isle altogether was 626 dead cows and 37 alive; but from my parish the number received was nothing like that; it was only 77.

4915. Is Belle Isle a place appointed by the Government inspector for the reception of carcases?—I do not know whether it is appointed by the Government inspector; I think not. We protested against its being appointed in that manner, on account of the nuisance.

4916. What became of the carcases of the animals that had died of the disease in your parish?—I cannot tell you; a good many of them, I am afraid, went for food. I include here those slaughtered on account of disease.

4917. Where would they be sent to in order to be disposed of?—If you mean for destruction, naturally to Belle Isle.

4918. When they were not sent there, where would they be sent to?—I cannot tell; perhaps to some of the other boilers in other parts of London; but Belle Isle is the most convenient place of all for my parish,

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because Belle Isle itself is in my parish; it is on the outskirts of it, and out of 611 cows that died or were slaughtered in the parish only 77 went to Belle Isle. What became of the others I cannot tell; certainly some that were diseased were slaughtered for food in the earlier part of the outbreak; it was admitted that they were.

4919. There are a great many private slaughter-houses in your district, are there not?—Yes, a good many; I cannot recollect the precise number.*

4920. (*To Mr. Murray.*) Can you tell us what the number is?—There are very nearly a hundred altogether in the parish.

4921. (*To Dr. Ballard.*) Do they facilitate the making away with the sick animals?—I do not think they do; I think there is too sharp an eye kept upon them; they have been visited since the middle of August as regularly as the cowsheds, and I am satisfied that none of the sick cows have got into the private slaughter-houses since then. What might have been done previously I cannot tell; but some of the cowkeepers in the early part of the attack stated that they sent them to the slaughter-houses at the Metropolitan Cattle Market.

4922. And yet the disease was not discovered when they were sent there?—The disease was not discovered; at least the first I heard of it was at the end of July.

4923. Is not there a system of inspection at the slaughter-houses in connexion with the Metropolitan Market?—Yes, I believe there is. There is an inspector appointed by the City authorities at the Metropolitan Cattle Market.

4924. Ought not those inspectors to be able to discover any animals that come in a diseased state to those slaughter-houses?—They ought.

4925. Do you consider the arrangements at the Metropolitan Cattle Market generally good?—I can scarcely give an opinion upon that point; all I can say is this, that there is some reason to believe, I think good reason to believe, that in some cases diseased beasts have been received there, into the regular slaughter-houses, where the beasts are slaughtered for human food. There is one slaughter-house there for diseased animals alone, and in two instances at least we have knowledge (I think I may say positive knowledge) that beasts have gone from there for human consumption.

4926. Though they have been slaughtered in the slaughter-house set apart for the purpose of killing diseased animals?—Precisely. Mr. Murray can give you more information about that, because he is more engaged in the slaughter-houses than I am; he can give you the cases.

4927. (*To Mr. Murray.*) Do you consider that many animals in your district have been sent to private slaughter-houses when they first showed symptoms of the disease?—I think that, in cases where the proprietors have made away with a few of their cows at the very beginning, and said they were healthy, before I had an opportunity of seeing their stock, it is very probable that those animals had the first symptoms of the disease, and they did go to private slaughter-houses.

4928. Are the inspectors appointed merely for the purpose of avoiding nuisance to public health, or is it their duty to inspect with regard to the cattle diseases?—With regard to the Cattle Plague; at least that is my duty.

Dr. Ballard.—Mr. Murray's duty was in great part to prevent, if he could, the introduction of diseased meat into human consumption.

4929. (*To Mr. Murray.*) Are you aware of those cases which Dr. Ballard has quoted of diseased animals having been killed at the Metropolitan Market, and their carcases then having been sold for human food?—Yes; I know of two instances.

4930. Would you state what those instances are?—One was the case of an animal belonging to a cowkeeper in the Liverpool Road. It had the disease for I think about three days, and was then sent to what is called the corporation slaughter-house as a diseased animal, with a view of seeing whether the meat was fit for food or not. It was there passed for human food; when I say "passed," all I know is that the proprietor of the cow stated to me that he got 5*l.* for the carcase for the market. In the second case, the owner, a cowkeeper in Barnsbury Grove, got 6*l.* 10*s.*

4931. Was it passed by Mr. Tegg, the inspector of the Metropolitan Market?—I do not think Mr. Tegg saw the first carcase. I afterwards saw Mr. Tegg on the subject, and he gave me to understand that he had not seen the carcase; but he has assistants there, and I presume it was one of the assistants who passed it.

4932. (*To Dr. Ballard.*) Have you anything to state as to the regulations in force for licensing the sheds?—I have a copy of the regulations which are in force in my parish which I can leave with the Commission, if you think fit, or I can read them now.

4933. Those regulations are drawn up, I presume, by the vestry?—They are drawn up by myself, and acted upon by the vestry.

4934. The vestry have had them drawn up as rules to guide them as to whether they are to prosecute or not in each case?—Yes; they form the basis of my recommendations to the vestry as to opposing any licence.

4935. The vestry have not the power of giving a licence?—No; they have the power of opposition, and they exercise it.

4936. Are those regulations drawn up with regard to the health of the animals, or only with regard to the sanitary condition of the houses round the sheds?—With regard to the health of the animals, and also with regard to the sanitary condition of the neighbourhood.

4937. In certain cases where the strictest regulations are carried out with regard to the health of the animals, I suppose a shed might not be licensed at all?—A new shed would not be licensed if it were too close to human dwellings, or if it were in a very poor and crowded neighbourhood.

4938. Will you put in the regulations?—I will.*

4939. Do you consider that the system of licensing works well at the present moment?—I do.

4940. Has it improved the condition of the cowsheds?—Most undoubtedly.

4941. Have the vestry of Islington taken any proceedings with regard to the Cattle Plague?—They have. When I first brought it to their knowledge they appointed two inspectors to visit the cowsheds and slaughter-houses regularly, and to advise the cowkeepers upon sanitary matters; afterwards, on the issuing of the Order of the Privy Council for appointing inspectors, those two inspectors of our own were appointed again by the magistrates, under the Order of the Privy Council, and had additional powers given to them, so that they might be free to act in any emergency, and they have acted under those powers; but for the most part they have informed Mr. Priestman, the Government inspector, of any outbreak that has taken place in the sheds. Had it not been for that Mr. Priestman would not have known of a good many instances in which an outbreak occurred. Mr. Priestman only visited when he was sent for, and the cowkeepers were disposed to keep the thing quiet. The vestry have also appointed a special inspector at Belle Isle, to look after the animals brought in there for destruction, and to see that they are destroyed, and that the hides are properly disinfected, and the manure also disinfected. Prior to the appointment of that inspector the hides used to go away with other hides without any further trouble being taken about them, and the same was the case with the manure; it used to be removed by a contractor without disinfection; but I served a notice upon all the boilers and knackers at Belle Isle, requiring them to disinfect their hides and manure before they allowed them to

* The witness subsequently stated that "the precise number of licensed slaughter-houses is 100."

* See Appendix E.

leave their premises, and this inspector sees that it is done. We have also made several seizures of beef which was condemned by the magistrates on the premises of salesmen at Belle Isle. That occurred in August. At the Michaelmas licensing certain sheds which had become infected and were empty, and required disinfection before they could be used again, were opposed by the vestry, and their licences were refused. The vestry altogether has taken a great deal of interest in the matter.

4942. (*Dr. Parkes.*) With respect to this licensing system which you have said works sufficiently well in ordinary times, would you suggest any change in it, or in the inspection of the cowsheds?—Yes. As regards the licensing I think that the number of cows to be permitted in a shed should be named in the licence. As it is, if a cowkeeper gets a licence for keeping cows he may keep as many as he can cram into his shed.

4943. How would you regulate that number in the shed; by the cubic space?—Partly by the cubic space; of course I should regulate it by cubic space, mainly.

4944. What amount of cubic space would you give to an animal?—Not less than 1,000 feet. I think I can show that the cubic space has something to do with the spread of the disease; that in the more crowded sheds it has spread more. The same relation was observed in the case of the lung disease in 1857.

4945. Would you regulate the number of cows in a shed by anything else than cubic space?—I should regulate it mainly by cubic space; but if I found more than usually good ventilation I might perhaps be disposed now and then to reduce the cubic space that was required.

4946. Would you require any evidence as to the ventilation of the shed, and as to a sufficient water supply?—All those matters we see to now; they are amongst our requirements which have to be complied with before a licence is granted.

4947. You get them complied with by threatening to oppose the licence, I suppose?—Yes.

4948. Would it not be more easily done by making it an understood thing that the licence should not be granted until those requirements were complied with?—Yes.

4949. With regard to the general cleanliness of the cowsheds in the parish, are they generally kept pretty well, or do they require constant superintendence and inspection?—They are always kept closely looked after; but some of them are even now in a bad condition; most of them are kept very clean. I speak now of course of the time since the licensing. Before that they were in a very dirty state, but most of them are now kept very clean. There are very few sheds which are habitually kept dirty and slovenly now.

4950. Do you think that if kept in a proper way these cowsheds do any harm or are any nuisance at all in the parish? Would you allow them to remain there, or would you insist upon cowsheds being entirely suburban?—I think it would be as well that they should be suburban, that is to say, that they should be removed from the metropolis; that is the opinion of the sanitary committee of our vestry, who passed a resolution to that effect. I may state, however, that I cannot trace any actual mischief from their presence in any instance.

4951. I understood you to say that you thought you had observed that the Cattle Plague had spread more in the crowded sheds than in the less crowded ones?—It has. I may just give you the general result. Taking 53 sheds where the disease broke out, I find that the cubic capacity of those 53 sheds taken altogether was 606 feet per cow. On the other hand, in 20 non-infected sheds, where the disease did not break out, the cubical capacity was 803 cubic feet per cow, showing a distinct difference of about 200 cubic feet. You will observe that I speak of sheds, not of establishments. I think those figures prove that the disease has certainly shown a preference for the more crowded sheds.

4952. Do you think that the facilities for the introduction of disease into the sheds were equal, or did the owners of the one class of sheds buy fresh stock, and the others not?—I cannot trace that at all.

4953. You think that it is just as likely that new animals had been introduced into the one as into the other?—Quite as likely, I think.

4954. Have you made any special inquiry upon that point, to see whether it is really the greater cubic space allowed to each cow which has lessened the chances of the introduction of the disease?—I have made a table showing the space allotted to each cow in the two sets of sheds; for instance, there was only one shed allowing 2,000 feet and upwards to a cow, and that was not attacked at all. There were two sheds with 1,500 cubic feet per cow, and those two sheds were both attacked. There were six sheds where there were between 1,000 and 1,500 cubic feet per cow, and of those two were attacked and four were not. There were seven sheds in which there were from 800 to 1,000 cubic feet; of those, five sheds were attacked and two were not. There were 13 sheds where there were 600 cubic feet and under 800; of those, nine were attacked, and four were not. Then coming to sheds with smaller cubical space per cow, there were 27 with from 400 to 600 cubic feet; of those, 22 were attacked and five were not. Of the sheds having from 200 to 400 cubic feet there were 11, and out of those nine were attacked and two were not. So that when you come to put those rows of figures together and contrast them you will see that there is some relation borne by the attacks of disease to the cubical capacity.

4955. Do you think that the chances of the introduction of the disease by buying were equal in the two classes of sheds?—I think so. I do not know anything to the contrary; but I shall be able to tell you more about buying presently. I have a memorandum especially about buying. The result of those figures is not to show a distinct rule; but it does show a difference, and the difference is in favour, so far as the propagation of the disease is concerned, of the more crowded sheds, and the last numbers I have given with the small cubical capacity seem to show it more clearly than anything.

4956. Could you put in a return stating these facts, giving the number of cows in the different sheds, and per-centage of attack and escape according to the cubical capacity?—I have a table here with the space in each shed. This table also relates to several other matters, such as the water supply and so forth; but it shows the number of cows usually kept, the cubical capacity of the shed, the cubic space per cow, the water supply, the position of the dung-pit, whether in the shed or out of the shed, the cases of the Cattle Plague, the numbers that died or were slaughtered on account of the Cattle Plague, and the number of the cows in the shed on the 30th of November, and out of those the number that were ill of the Cattle Plague. Then it shows the number brought into the shed since the infection; and lastly the number of cases among the cows newly brought into the infected sheds.

4957. Will you hand it in?—I will.*

4958. But the impression upon your mind is decidedly so far that the cubic space allotted to a cow has an influence upon the propagation and development of the disease?—The impression upon my mind certainly is that it has something to do with it. I do not say that it has to do with the development of it; but the cows in the crowded sheds seem to me to be more liable to attack than the others.

4959. You do not believe that in those cases the disease in any instance originated spontaneously?—I do not; quite the contrary.

4960. You believe merely that having been introduced it spread more in the crowded sheds than in the less crowded ones?—Not only that it spread more, but that the animals there were more likely to suffer from the poison when introduced in any way.

4961. You did not inquire particularly into the

* See Appendix E.

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number of beasts purchased in these different classes of sheds?—No.

4962. In order to see whether the immunity of some of the sheds with large cubical space was not owing rather to the disease never having been introduced than to the disease having been introduced and not spreading?—I cannot tell how the fact may be with regard to that.

4963. Have you any case of disease occurring in a large shed where one beast was attacked which had been lately bought, and then no other case occurred?—No; but Mr. Murray may know of such a case.

4964. Have you any reason to think that the disease in any case has been propagated by means of the drinking water of the cows?—I have.

4965. Will you state the particulars?—Most of the sheds in my parish are supplied by New River water; but 10 sheds are supplied by water from superficial wells. Of those 10 sheds, nine have suffered from the disease; one only has escaped at present.

4966. (*Viscount Cranborne.*) What is the proportion on the other side?—It is very much larger on the other side. I could have taken it out; it is not stated in the paper I have handed in.

4967. (*Chairman.*) What is the other water which is put down in this table besides the New River water?—It is the water supplied from wells in the yards or sheds. This, I think, is an important fact. The very first shed attacked was Mrs. Nicholls's, and through Mrs. Nicholls's the disease spread rapidly. Now that shed is supplied with water from a well actually in the shed.

4968. (*Dr. Parkes.*) And that well is a superficial well, is it not?—Yes; that well is a superficial well.

4969. And has a chance of being contaminated with the sewage from the animals?—Yes; it has a chance of being so contaminated, because the drainage may be leaky.

4970. (*Viscount Cranborne.*) Have you analyzed the water of any of these wells?—I have not; but there stands the fact as to the attacks.

4971. (*Dr. Parkes.*) In that case is the well in such a position as to be likely to be contaminated by the sewage?—I think it is; it is in the shed, and it cannot be many feet from the main drain of the shed; it is in the middle of the shed, and the drain runs down the shed; and although the shed is paved with brick, and well paved too, we know that liquid matters will ooze through between the bricks, and will soak into the soil under the best of circumstances, unless the paving is laid properly upon concrete.

4972. (*Viscount Cranborne.*) Is it too late to have the water of those wells analyzed?—I do not suppose it is too late.

4973. No alteration has been made in them?—No alteration has been made that I am aware of. The drainage has been relaid in Mrs. Nicholls's shed I believe to some extent; some alteration has been made in Mrs. Nicholls's shed.

Mr. Murray.—There are new drains there.

Dr. Ballard.—Liddiard's shed is another in which the well is in the shed itself.

4974. (*Dr. Parkes.*) Have you at all taken out the per-centage of the attacks in those sheds that are supplied with New River water and those that are supplied from superficial wells?—No; but I could easily get it out. I have all the materials here.

4975. (*Viscount Cranborne.*) Will you also give us in the other table the per-centage of the cubical space of the sheds?—I will add that to the table.

4976. (*Dr. Parkes.*) What is the ordinary depth of those superficial wells?—I do not know. I have never seen them opened.

4977. In all cases they are merely sunk in the earth, I suppose; in the clay or whatever it may be?—Exactly, until they get water.

4978. They may be perhaps 20 or 30 feet deep?—Something thereabouts. They are of no very great depth; when they get water they stop.

4979. (*Viscount Cranborne.*) What is the soil in that neighbourhood?—In my parish it varies. Round Mrs. Nicholls's it is gravel, and at Mr. Liddiard's, where the well is in the shed, it is a sort of gravel or brick earth; in other parts it is clay.

4980. (*Dr. Parkes.*) Then the impression upon your mind is very much in favour of the idea that the water may possibly have been the means of communicating the disease in these cases?—My opinion is that it is in some way connected with the outbreak, but whether it was the means of the communication of the disease I cannot tell.

4981. With regard to the first cases in Islington, those in Mrs. Nicholls's shed, have you in your inquiries been able to learn whether there were any cases prior to those in Islington or in any other parts of the metropolis?—I cannot speak of anything relating to the rest of the metropolis, but in Islington I am certain that they were the first cases. I say that after inquiry.

4982. I think you say that six cows were attacked on the 27th of June?—Yes, I think there were six.

4983. Were there six attacked, or was it only one or two?—Six; so I am told. My informant is Mr. John Nicholls.

4984. All those six cows were bought at the Metropolitan Market?—Yes; so he told me, to the best of my recollection.

4985. And all about the same time?—Yes; that was what he informed me.

4986. Those six cows were in a sort of quarantine shed, were they not?—Yes; and there were about three old cows along with them at the time. I was told that those three old cows were not attacked until after the attack in the principal shed.

4987. Is that shed near the lairs where animals are kept between the markets?—It is close by the lairs.

4988. Was it supposed at all that the disease was communicated from those lairs to those cattle?—I never heard that stated.

4989. With regard to disinfectants, will you tell us what disinfectants are used?—Chloride of lime mostly. Some few have used Condy's Fluid, and one, I believe, has used Stockholm tar and Condy's Fluid as well, but the principal disinfectant used is chloride of lime.

4990. Have you any opinion yourself as to the best disinfectants?—I have not. The chloride of lime, I may state so far as we have gone, has answered uncommonly well. I will tell you the result of its application. I have a memorandum here of the fresh outbreaks in previously infected sheds among cows newly brought in. In some of those cases disinfectants were freely used; I think I may say in almost all; and I can give you the result of the attacks in the cases of newly brought-in cows in those instances.

4991. They having been put in infected sheds?—Yes; in infected sheds. I find that there are 18 cowkeepers who bought cattle, and put them into the infected sheds, during the period of the prevalence of the disease. In only five of those instances have the newly brought-in cows been attacked; that is to say, five out of the 18; 13 have had no fresh attacks amongst them. Of those five in which the cows were newly attacked, one belonged to Mr. Harvey. Mr. Harvey has never had his shed completely empty of cows, and the fodder lies in the infected shed. He did little in the way of disinfection. Panter never completely cleared his cows out, but lime-whited his premises; he has kept some of the cows there. French never completely cleared his shed of cows, but used abundance of chloride of lime in his shed, but that did not save him. Mosey did the same, and Liddiard the same again. He used no disinfectants, and he kept buying in all the time. Of the 13 who had no outbreak amongst the fresh cattle bought in, nine emptied their sheds of cows entirely, and disinfected them thoroughly before introducing fresh cows, and none of those nine had a fresh outbreak.

4992. The disinfectants used were principally chloride of lime?—Yes; there were four which did

not empty their sheds completely, but merely used disinfectants. Of those who emptied their sheds before disinfection, and then disinfected with chloride of lime, no new cases have occurred among cows newly brought in. Of nine who did not empty their sheds before disinfection, five have had a recurrence of the disease in the fresh stock. But the only fair instances of course are those who did empty their sheds before disinfection, and out of those not a single one has had the disease again.

4993. For what time did they keep their sheds empty?—A very variable time. Some of them a month or two.

4994. Did they use the chloride of lime everywhere, on the floors and ceilings, and all about the sheds?—I think they did, but that was all done under Mr. Murray's superintendence; I believe he saw to it.

4995. Have you ever known any case of a shed in which the disease was spreading in which it appears to have been stopped by the use of disinfectants?—No; not by simple disinfectants.

4996. Have you ever known a case in which it seems to have been stopped at all?—I know one instance in which a cow has remained throughout the attack in the shed, and has never been attacked, being apparently insusceptible of the disease.

4997. Was that an English or a foreign cow?—An English cow.

4998. You do not know of any case of a large shed containing 20 or 30 cows where the disease having appeared, and the cows not having been removed, the disease has stopped, after killing three or four of them, disinfectants having been used?—No. The disease seems, as a rule, to have gone through the whole, and if it has left one or two it has only been one or two that it has left.

4999. Are you satisfied with the condition of the slaughter-houses in Islington, and the powers that you have of keeping them in order?—I am pretty well satisfied with their condition. I think it is desirable that some regulation should be laid down by authority as to the periods at which lime-whiting is to take place, and so forth. At present we can only compel amendments (except when a nuisance arises) at the periods of licensing, and then we have to do it under a threat of opposing the licence.

5000. What you want is a positive power?—Yes; we want a positive power.

5001. With regard to the sale of the meat of animals which have died of the Cattle Plague, have you yourself traced any bad effects to human health from it?—No.

5002. Have you inquired into that point?—I have not had any opportunity of doing so. It is difficult to tell when meat is on sale whether it is derived from a beast that has died of the Cattle Plague or not; and again it is difficult to tell whether any meat that a person has bought is derived from a Cattle Plague beast. The difficulties of tracing diseased meat into human consumption are amazing to any one who has not tried it.

5003. Therefore you would not like to say that it was not injurious; you say merely that you have not traced it?—I should not like to commit myself to an opinion that it was not injurious, and at the same time I should not like to commit myself to the opposite opinion without proof, assuming the question to relate to my own experience.

5004. No sudden cases of disease have occurred which you thought might be traceable to the use of diseased meat?—No.

5005. Nor to the use of milk from a diseased cow?—No.

5006. I did not quite catch what you meant to imply when you were speaking of the sheds in the same yard; you cited the cases of several sheds in the same yard, did you not?—Yes.

5007. Those were cases in which the sheds were attacked at the same time?—Yes; or thereabouts.

5008. Owing to the introduction of the disease into one shed?—Yes; apparently.

5009. How do you think the disease spread to the other sheds in the yard?—I cannot tell; the sheds were contiguous; some immediately abutting the one on the other. In the case of Huckett and Grant, for example, they almost formed part of one shed. You passed from the door of one shed to the door of the other. In some cases the sheds were at the extremity of a yard, as in the cases of Pym, and Pecket and Lowther. Pym's shed is in the middle of a large mews, and Pecket and Lowther's at the end of the mews; both those sheds were attacked at the same time; but that is an instance where the water supply is derived from a well in the yard, that is to say, in the mews, and the water might therefore have been one means of communication.

5010. Have there been cases of this kind at Islington, that in some instances the disease has passed slowly through a cowshed, attacking cow after cow, rather at intervals, and others in which it has attacked them all at once?—Yes; but Mr. Murray will be able to give you more information about that than I can, as he has visited the sheds from day to day.

5011. (*To Mr. Murray.*) Have there been any cowsheds through which the Cattle Plague has passed in which there has been a difference in the rapidity of the transmission of the disease from animal to animal, in some cases the transmission occurring slowly, and in others very rapidly?—Yes.

5012. How would you account for that?—I should say that it results from the peculiar susceptibility of some animals to take the disease more readily than others.

5013. You would not attribute it either to a difference in ventilation, or in cubic space, or in water supply?—Not exclusively.

5014. (*To Dr. Ballard.*) The great point which I wished to know was whether the disease has not been propagated in those rapid attacks by means of the water?—I will take a memorandum of that question, and make inquiries.

5015. With regard to the removal of the hides and the manure which were not disinfected at Belle Isle; was that after the Orders in Council appeared directing their disinfection?—Yes.

5016. The orders existed, but they were not carried out?—Exactly; they were not carried out until I took the matter into my own hands.

5017. Can you give us any information with regard to the disposal in the cowsheds of the manure which comes from the animals that have been suffering from the Cattle Plague?—In all the cattle sheds in my parish the dung is kept somewhere on the premises for a period varying from three days to a week, until it can be removed by the contractor. In most of the establishments the dung is stored in the yard in a dung pit; but in 12 of them, from various reasons, partly from the situation of the cowshed, and the absence of a yard, and so forth, it is stored within the cowshed itself. In 10 of those cases in which it is stored within the shed itself the Cattle Plague has appeared, and in two only have the sheds escaped. In one of those two cases the cowkeeper sent away his cows altogether from the shed, so that they were not exposed to that source of disease.

5018. You trace a very manifest effect to the retention of the manure?—Yes. You will see the facts if you look at the table which I have handed in. The cross in that column signifies "dung in the shed." I think that speaks for itself; and I may state that I observed a similar relation between the attacks and the storing of manure in 1857, with regard to the lung disease. I found that it had a bearing also as regards the lung disease. In 41 sheds, in which at that time dung was not stored in the sheds, I got information as to 31 sheds as regards the disease. I found that eight had cases of the disease, and 23 had no cases; whereas, on the other hand, out of 12 sheds in which the dung was stored in the shed, eight had cases of the disease (in one case I could obtain no information), so that eight sheds of each kind had cases of the disease; but in the one case it was eight

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out of 31; in the other case it was eight out of eleven; therefore I conclude that the retention of the dung seems to have a bearing upon, at any rate, the occurrence of two kinds of disease, and that would lead me to suppose that the retained dung did not generate the specific cause of the disease in this case, but merely acted as affecting the general health of the cows, and thus predisposing them to suffer from the poison accidentally introduced.

5019. Will you allow me to ask you whether you have seen any evidence of the disease being carried by persons in attendance upon the sick cows?—I can tell you this, that Mr. Murray, our inspector, who is here, and another gentleman who has been appointed to inspect the sheds, a Mr. Chipperfield, a surgeon, went from shed to shed almost daily; and though that has been done up to the present time, a large number of sheds, 21 or 22 sheds, have never been attacked at all. If they could have carried the disease it must have been carried into all the sheds nearly every day, but they have never taken it. The disease spread apparently independently of the visits of our inspectors. I may say that they have been careful; they have not gone straight from an infected shed to another that was free from disease.

5020. They have taken some precautions; they have remained outside the sheds, or taken care not to touch the beast?—Yes; they have gone to the infected sheds last, and taken precautions of that kind. Mr. Murray will be able to explain it better than I can.

5021. (*To Mr. Murray.*) What precautions did you take?—I have made it a rule never to touch diseased animals in any shed; and also I have made it a general rule, not absolutely a particular one at first, but latterly I have made it a particular rule, not to go into a shed where I knew that no disease has been, if I have been previously into an infected shed.

5022. Have you used disinfectants at all on your own person?—No.

5023. Have you cleaned your boots, or taken any trouble in that way?—I have generally wiped my feet as clean as I possibly could whenever I have left a shed.

5024. Have you known any instances of the disease being carried by hides?—Not of my own knowledge.

5025. (*To Dr. Ballard.*) Have you any information to give as regards Belle Isle?—I can put in a paper showing the number of cows received alive and dead at each of the establishments each month at Belle Isle, and the number received from Low's lairs. Now Low's lairs, at Belle Isle, is a place where cattle stand prior to the market, so that it may be assumed that all the cases that went from Low's lairs to the knackeries were cows that were on their way for sale at the market, and died before they got there.

5026. Were there a large number that went from Low's lairs to the knackeries?—113.

5027. What is the date of that?—The numbers in the various months are these; in July, 8; in August, 64; in September, 21; in October, 16; and in November, 4.

5028. Mr. Low was the person who sold the first cows that were attacked to Mrs. Nicholls, I believe?—I cannot say that.

5029. (*To Mr. Murray.*) Do you know whether that was so or not?—Mrs. Nicholls has informed me that as a rule she buys her cows from Mr. Low.

Dr. Ballard.—I have a return here of the cows received each day into the knackeries at Belle Isle, which I can hand in if it will be of any use. It appears that almost all the animals that went to the knackeries were cows. There were three bulls, two heifers, and four calves, but all the rest were cows out of the 663.

5030. (*Mr. Read.*) You have stated that in some cases two or three cows in a shed had escaped the Plague; do you mean that they have recovered, or that they have escaped the infection altogether?—Some have recovered. In two cases I know of they have recovered, but here and there there seems to be a cow that is insusceptible.

5031. You have not noticed whether in those two or three instances they have had a slight indisposition of any sort?—No; perhaps Mr. Murray will be able to tell you more about it.

Mr. Murray.—In only one case that I know of has a cow not exhibited any indisposition; that was at Dennison's.

5032. Have you noticed any cases in which they have had only a very slight attack of Plague?—Yes.

5033. Have you noticed that in those cases there has been any eruption of any sort?—No; there was no indication beyond this, that the animal was evidently dull and dispirited, and that the milk secretion had lessened. As a rule, those cases never went on to anything very extensive in the way of disease. In one very light instance the animal recovered.

5034. Can you give the Commission any idea of the per-centage of those mild cases?—The mild cases would be somewhere about six or seven per cent., as nearly as I can tell.

5035. There is nothing very remarkable in the carcase of a bullock being passed for human food at the diseased slaughter-houses in the Metropolitan Market, is there?—I really do not know myself, beyond that I have seen it pass there. I do not know whether it is the general rule to pass it.

5036. You are not aware that it is the general rule to kill a beast which is supposed to be diseased in the slaughter-house and then if the carcase of the beast is supposed to be fit for human food to pass it for that purpose?—I only like to state what I have actually seen, and that is, that in two instances where the animals were diseased, from the money which the proprietors got I have every reason to believe that the carcases must have been passed as fit for the market.

5037. You did not see the meat?—Yes; I saw the meat.

5038. Do you think that the carcase presented any apparance of being unfit for human food?—The carcase did not present any such appearance; it was only from knowing that the animals had had the disease beforehand, and from an examination of the viscera, that there was undoubted evidence of the disease, but not to any great extent. I must say that if the carcases only had been shown to me I should not have been able to tell, had I not previously known the fact, and had I not seen the intestines and other viscera, that the animals had had the Plague.

5039. (*Mr. Ceely.*) You remarked that neither in the cows that recovered without any symptoms of indisposition, nor in those that had had the disease, but lightly, had you observed any eruptions. May I ask whether any eruption was looked for?—I did not look for eruption. I simply saw that the animal was indisposed.

5040. You are probably not aware that eruption has been noticed in the case of animals slightly affected, and in others even in convalescence?—Yes; I believe that to be the case; it is so stated.

5041. You have not seen it?—I cannot speak from my own knowledge, because I have not examined animals so slightly affected.

5042. And you have not observed in others in convalescence any eruption about the thin parts of the skin; the arms, or the neck, or the jaw?—No.

5043. You have not looked for it?—No; I have not looked for it.

5044. (*Mr. Lowe.*) (*To Dr. Ballard.*) Do I understand you to say that you have something you can tell us about the origin of the disease with regard to cows?—I can state the facts with regard to the outbreak in Mrs. Nicholls's shed, which was the origin of it in Islington.

5045. Did you not say that you could tell us something about it?—I have told all that I can tell. I have nothing additional to say.

The witnesses withdrew.

JOHN WHITMORE, Esquire, M.D., examined.

5046. (*Chairman.*) I think you are the medical officer of health in St. Marylebone?—I am.

5047. Will you state to the Commission whether you have been able to trace the origin of the Cattle Plague in Marylebone in many cases?—I think I have. I think I have been able to trace the first outbreak of the disease in the parish. I have taken some trouble to inquire, and the result of my inquiries is that a Mr. Drewell, a cowkeeper, who generally has about 80 cows within the limits of Marylebone, and who has two sheds, one in Beaumont Mews and another in Little Marylebone Street, purchased on the 19th of June four Dutch cows and one English cow at the Cattle Market. The four Dutch cows went to the shed in Beaumont Mews; the English cow went to the shed in Little Marylebone Street. On the 24th of that month, that is, five days after the purchase of the English cow, she showed symptoms of disease; that was the cow that went to the shed in Little Marylebone Street. All the cows were purchased on the 19th of June, and on the 27th of the same month the disease was general in that shed.

5048. (*Dr. Parkes.*) The disease was general in the shed where the English cow went?—Yes. I should state that the English cow originally came from Edmonton, but had been taken to the market to be sold. With regard to the disease in the other shed to which the four Dutch cows had been taken, it did not appear until the 13th of July; it broke out first with those Dutch cows, and then extended to pretty nearly the whole of the rest of the herd in that shed. That was the large shed. But it is very clear from what I have ascertained that the disease was taken from the shed where the English cow was placed by the cowkeeper's men, who were employed on both sheds. The disease which had broken out in the larger shed on the 13th of July, that is, nearly a month after the former case had occurred in the other shed, was communicated by the men who went from one shed to the other.

5049. (*Chairman.*) Then it is your opinion that the disease was communicated to the cowsheds in your district from the market?—Yes; in the first case of the disease. I have taken some trouble to ascertain when the first outbreak took place, and I find that that was the first case. Simultaneously with that outbreak another cowkeeper of the name of Rice purchased some cows on the same day, the 19th of June, which were taken to his shed, and on the 25th of that month the disease broke out in his shed.

5050. Did those animals belong to the same lot in the market as the others you have spoken of?—That I do not know; but it is important to observe that the disease occurred in the shed which the English cow was taken to, and it would appear from that that the English cow had got the disease, and was incubating it; but it does not appear so plain that the Dutch cows were, because where the Dutch cows were the disease did not break out until nearly a month afterwards; but where the English cow was, that particular cow was attacked on the 24th, and all the herd were infected two or three days afterwards.

5051. Is it your opinion that the state of the dairies in your district was such as to create the disease of themselves; to generate it?—Certainly not. My experience is that the disease in Marylebone has raged most in those sheds where the greatest attention to ventilation, cleaning, and sanitary arrangements generally, had been observed. It is a curious fact that in some of the largest and best ventilated sheds in the parish the disease has been very prevalent; whilst in small, close, confined sheds the disease, though it has broken out, has only broken out lately, and not quite in so virulent a form apparently. I may say, as the result of some trouble that I have taken, I find that where there have been the largest number of cows the disease seems to have been more rapidly propagated, if I may so speak, than where there were a smaller number. In the parish there are now (that is, last week, according to the last return I have seen), only seven sheds in which the disease has not appeared; but every one of those is a small shed where not more than five or six, or at the utmost seven, cows are kept; whilst in sheds where 80 or up to 140 cows are kept it has been most prevalent.

5052. In those small sheds that have escaped the disease have any new cows been introduced from the market?—No; no new cows.

5053. The proprietors have not purchased fresh stock?—No; they have acted upon the advice that I have given to them, not to purchase.

5054. Have you many slaughter-houses in your district?—95; but at 41 of them only are cattle killed; the other 54 are used for the killing of sheep, pigs, and lambs. But I should state that, though there are that number of slaughter-houses, in a very large proportion of them there is very little cattle killed. The owners take out a licence for a slaughter-house, supposing it possible that they may require to have one, and many of them at certain periods of the year perhaps use them, but they do not all invariably use their slaughter-houses.

5055. Do you believe that the existence of these private slaughter-houses tends to the spreading of contagious disorders among cattle?—I have no evidence of that fact whatever.

5056. Does it not enable cowkeepers to make away with diseased cows in an early stage more readily?—I have endeavoured to obtain information upon that point, and I have instructed my inspectors to watch carefully those slaughter-houses, with a view to ascertaining whether diseased cattle have been killed, but in no instance have I found that it has been done.

5057. Have the cowsheds very much improved in condition in the last few years in your district?—Yes, they have improved lately. But I may state that the sanitary regulations for the cowsheds in my district have been generally of a very efficient character. I heard Dr. Ballard give the amount of cubic space which was in some instances allowed for the cows in the Islington district. Now in the parish of Marylebone we have a set of rules, of which I have a copy here, which are approved by myself and adopted by the vestry, and which the licensing magistrates require to be carried out previous to granting a renewal of a licence. Those rules provide that "every "cowhouse shall have a space of at least eight feet "by four feet for a single cow, or a space of at least "eight feet by seven feet for two cows (when kept "in pairs), each cow to have a breathing space of at "least 1,000 cubic feet, the cowhouse to be properly "lighted and ventilated; and in all cases where there "are inhabited rooms above cowhouses, or when the "sanitary state of the neighbourhood requires it, to "be provided with tight roofs and ventilating shafts, "so as to convey the noxious exhalations above the "level of the adjacent houses." I may state that on every application for a licence for a new cowhouse, the first thing my inspectors do is to ascertain the amount of cubic space the cowhouse contains, and according to the cubic space, and the superficial space also, a licence is granted for a number of cows; and no licence is granted without it.*

* The following letter was subsequently addressed to the Secretary by Dr. Whitmore:—

Sir, 15, Wimpole-street, December 15.

In my evidence before the Cattle Plague Commissioners on the 7th inst., I omitted to state a fact which I should like to have, if possible, added to it.

In reference to the mode in which cows are kept in London sheds, the plan very generally adopted is to place two cows in one stall, the width of which does not exceed 6 feet or 6 feet 6 in.; this I consider objectionable, and to some extent cruel. In such a confined space it is quite impossible for both animals to lie down together in comfort. I have often seen them both in a recumbent position, but in attitudes so confined and cramped as to afford them anything but rest, and when they get up it is

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5058. Has the disease been more or less violent in the cases of sheds where those regulations have been attended to?—I cannot say that I have discovered that the disease has been less violent in well-ventilated sheds than in others. If I were to express an opinion at all I should be rather inclined to say that a large amount of ventilation has been rather unfavourable than otherwise, for some of the cowkeepers have told me that where there has been a great amount of ventilation they have had a great deal of the lung disease, and where the lung disease has prevailed the cattle disease has also prevailed; so that really in some of the best ventilated sheds the disease has been most prevalent. In others, not so well ventilated, the disease has not broken out so soon, and has not been so generally prevalent.

5059. Have there been any difficulties in your district with regard to the disposal of the carcases of the diseased animals?—I think not. That has been under the care of the inspector appointed by the Privy Council. I have not heard of any difficulties. A great many of the carcases have been sent to Belle Isle, the place where these carcases are disposed of; but in the very large majority of cases where the disease has broken out, the cowkeeper has had the wisdom, I should say, to get rid of his cows altogether before the disease had attacked them.

5060. I think I understood that there were hardly any cases of disease at all in Marylebone at one time?—Yes; there was an immunity, or something like it. From the 30th September until the 29th of October, with one exception only, no fresh case of disease had broken out in the parish during that time; but since then the disease has appeared again in some five or six sheds. I have not been able to ascertain how it got there.

5061. Has that been in sheds where there have been new purchases?—Yes.

5062. And sheds where the disease had been before? Yes, decidedly; but in this particular shed of Mr. Drowell, where the disease was so very virulent, and where out of 90 cows he lost 80, the shed was very carefully and very admirably well cleansed, purified, and ventilated; the whole building was washed in hot lime, and scraped, and the whole of the pavement was removed and replaced, and everything was done that could be done to remove every possible trace or taint of the disease. Since then he has imported into his shed some 20 fresh cows. They have been there a month or upwards, and up to the present time no new case of disease has appeared; but he has taken the most stringent precautions to prevent anything like the infection being carried. He allows no person whatever to enter his shed, and the cows that he purchases are placed in quarantine. If he purchases cows, as he does generally, at the place of debarkation, he brings them home in his own van, and places them in quarantine for a fortnight before putting them with his other cows. They undergo the quarantine in another shed. If they pass through that period safely, they are then admitted to be with his other cows. That has been going on for six weeks now, and up to this time he has not had any fresh outbreak.

5063. Has he bought lately any foreign cows?—Yes; within the last week he told me that he had purchased some.

5064. (*Dr. Quain.*) How many cows were there in the sheds in your district when the disease first made its appearance, and how many are there now?—1315 was the number of cows for which licences were granted, and there were in fact that number when the disease broke out. 700 cows, to my knowledge, have been attacked with the disease, and 300 have died in the sheds. There are at present in the sheds 340, and the recoveries, I think, are somewhere about nine or ten per cent.

5065. With regard to the propagation of the disease, have you any striking illustration of its being carried by persons from place to place?—I am afraid I am a personal illustration of that. When the disease first broke out I was anxious to know something of it, and fearing that it might be prejudicial to the health of children who drank milk, I made it my special business to investigate the disease, and went from shed to shed, and unfortunately, from beast to beast, and examined them carefully for that purpose; but I found that the disease followed in my track. In those several sheds which I had visited, five or six days after I had been to them, and where I had reason to believe that no one else had been, the disease broke out. I may state that I have had no instance of any cow having been kept in an infected shed during the time that other cows in the shed have been attacked with the disease, and not having had it. I know of cows having had the disease, and recovered; but I have no case of a cow not having had it that was left in a shed in which other cows were attacked.

5066. You have had no case of a cow escaping which was left in an infected shed?—No; of course many were taken away before they had it, but the fate of those cows I do not know. I made it my business to inquire into the fact of the escape of cows in an infected shed, and not a single instance has come within my knowledge, or within the knowledge of my inspectors, where the cow has remained in a shed where the disease existed free from the disease, and which remains there now.

5067. Have you had any complaints from the people in the neighbourhood of these sheds of their being injurious to their health?—Yes; I constantly have complaints made to me in my capacity as medical officer of health of the disagreeable effluvia from the cowsheds; that is in the crowded localities. Many of the sheds in Marylebone are in the worst and most crowded localities. Take, for instance, Lisson Grove, which is a densely populated locality, where there are a large number of persons living in courts. Those who live in the neighbourhood of the sheds experience inconvenience from them there. I think I may say, as the result of some investigation I have made, that the health of those people is to some extent (I cannot say to any great extent) affected. I think I trace indications of fevers and diseases of that class prevailing more in the vicinity of the cowsheds than at some distance from them.

5068. Is that the case even if the cowsheds are kept clean?—Unfortunately in those localities they are not kept clean. They are instances of cowsheds being badly kept.

5069. The magistrates have the power of refusing the licences?—Yes.

5070. Do they do so?—On the last occasion I recommended the magistrates to refuse the licence in two cases, and they did so.

5071. If I understand you rightly, the cowsheds in open parts of towns are not in your opinion very objectionable?—No, I think not.

5072. So far as the injury to the public health is concerned, you would not think it imperative to compel the removal of cowsheds to country districts?—No; but those in confined spaces and narrow ought to be removed to more open spaces; and I would have regulations imposed for the entire arrangement of the cowsheds. The regulations now in force for the sanitary arrangements of the cowsheds are arbitrary; it depends upon what the vestries think proper to advise. Now, I think some Government regulations as to the cubic space, the frequency of

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with great struggling and difficulty. The cowkeepers give as a reason for keeping two cows in a stall that they feed and thrive better. If such is the case then I think the width of each stall should not be less than 8 feet.

I am,
Sir,
Your obedient servant,
M. Bernard, Esq. J. Whitmore.

P.S.—I may add, that I made a report to the foregoing effect to the Marylebone Vestry, which was placed before the Licensing Magistrates on the recent granting of licences to cow and slaughter houses.

washing out the sheds, and the removal of the manure, should be published, and the cowkeepers should be compelled to observe them.

5073. Those regulations should, in your opinion, be drawn up by some central authority?—I think so.

5074. Either the Government or the Metropolitan Board of Works?—I think the Government. I think there ought to be uniformity.

5075. As to the milk which has come from the country, as compared with the milk of cows kept in London, do you think there is anything preferable in the one or injurious in the other?—I have examined some 40 different samples of milk, partly from the town and partly from the country, and the result I have arrived at is that the town cows produced a better and richer milk than the country cows.

5076. Do you mean richer in the cream?—Richer in cream and caseine.

5077. Would you say that it was absolutely richer milk and more wholesome milk?—I do not know about its being more wholesome, but it is certainly the fact that it is richer. I have the results of several analyses which I have made of the milk taken from different dairies in the parish, and also the results of analyses of some milk from cows in the country. I should tell you that in all the dairies a very large proportion of the milk now supplied comes from the country. Not more than a fifth of the milk consumed in London at present is obtained from the London cows; that is the case, at least, as far as regards Marylebone. I have endeavoured to ascertain the richness or the quantity of nutritive constituents contained in the country and town milk respectively. I have here a memorandum of the results. No. 1. is country milk, at a specific gravity of 1026, a weight of serum 1027, with a per-centage of cream 14, and weight of dried curd, 87 grains.

5078. Will you hand in that table of results?—Yes; but I have some to add to it first. The result of it all is that as a rule the London milk is the best; there is a greater per-centage in it of cream, and a greater weight of dried curd. Of course the specific gravity of the serum, or the whey, is a little greater in these; that, I apprehend, is in consequence of the specific gravity of the cream being lighter.

5079. Those are selected specimens that you have taken; do you believe that the quality of the milk supplied to the public is as good as those figures would represent it to be?—These specimens were indiscriminately purchased. The milk supplied to the public now I am afraid is not quite so good, because those who have the selling of it dilute it.

5080. In your opinion there is no objection to well-placed cowhouses in London?—No.

5081. As to slaughter-houses, there are a great many in your district, are there not?—Yes.

5082. Are they offensive?—No; they are exceedingly well kept, and the regulations imposed upon the proprietors of the slaughter-houses are such as to render it impossible for them to be otherwise. For instance, if an ox is killed to-day, the refuse, the blood, and so forth, must be removed to-morrow morning.

5083. Where is it taken to?—The blood is sold for manufacturing purposes.

5084. What becomes of the other refuse?—It goes perhaps to the nearest dung heap, but in my parish the dung heaps are removed three times a week.

5085. It has to be carried away or sent down the sewers?—No blood is allowed to pass down the sewers; some liquid may perhaps pass down, but not blood.

5086. Have you examined into the character of the meat brought from the country and the meat slaughtered in London?—Not personally. Mr. Way, who is in attendance, can give you information upon that point.

5087. (*Dr. Parkes.*) You say that Mr. Drewell bought a cow on the 19th of June in the market, and that Mr. Rice bought a cow on the same day, the 19th of June, in the market, and that Mr. Drewell's cow was attacked on the 27th of June?—No; on the 24th.

5088. When was Mr. Rice's cow attacked?—On the 25th.

5089. Were those the first cases that occurred in Marylebone?—They are the first cases in Marylebone; I think I may confidently say that that was so.

5090. Was Mr. Rice's cow an English cow?—No; his cows were Dutch cows; the first cow in Mr. Rice's place that was attacked was a Dutch cow.

5091. Mr. Drewell's was an English cow?—Yes.

5092. They had both been purchased in the market?—Yes.

5093. With regard to your comparison between town and country milk, I presume your town milk was taken direct from the dairy; from the cowshed?—It was milked from the cow, and given to my messenger.

5094. The country milk was taken as supplied in a shop in London, I suppose?—Yes; but upon the faith of the cowman, who I believe would not deceive me upon the point, that it was exactly as it had come from the country.

5095. 1,026 is rather a low specific gravity for country milk, is it not?—Yes; but allow me to say that when there is an increase in the quantity of cream there is a diminution in the specific gravity.

5096. But even then your serum ought to be more? Yes; it is more.

5097. It seems rather doubtful whether water had not been added?—I do not think it had. In some of the milk which I have examined the specific gravity was lower than that, and at the time when the Lancet Commission made their examinations it was found that there were some very excellent samples of milk in which the specific gravity of the milk was as low as 21, and the specific gravity of the serum 23, and the cream 18 per cent. I have taken some pains to ascertain the correctness of the figures I have in this table.

5098. Do you at all believe that in any case the disease has originated spontaneously in Marylebone?—Certainly not.

5099. Have you in every case been able to trace the introduction, or the possibility of the disease having arisen in an infected shed?—Where it has been necessary to investigate, where anything like a doubt has been thrown upon the subject, I have investigated it, and I have traced contagion always.

5100. You have yourself traced contagion?—Yes.

5101. (*Mr. Ceely.*) I think you said that you took some pains to investigate the character and nature of the disease when it first occurred?—I did, in the first instance.

5102. Have you formed any opinion as to the form of it, whether it is typhoid or otherwise?—I think it is fever of a low type.

5103. You do not think it eruptive?—No.

5104. Have you seen no eruption?—No.

5105. Have you looked for it?—No.

5106. Have you seen no eruption in convalescent animals?—No.

5107. Are you not aware that it has been observed?—I have heard so. One of the symptoms which I have seen, and which has not been generally remarked upon, is that in the first stage of the disease I have observed the inflamed condition of the vagina.

5108. Have you seen any eruption about the thin parts of the skin on the arms or the neck?—No.

5109. Not in the cases of animals that have recovered?—No; my attention has not been specially directed to those points.

5110. (*Chairman.*) Is there anything else of importance which you wish to bring before the Commission?—I think not. I have stated everything, except that I have quite come to the conclusion in my own mind that this is the most contagious disease that we have ever heard of, and that it is communicated entirely by contagion.

5111. (*Mr. Ceely.*) Did you ever know a case of a typhus or a typhoid fever communicated in the way

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in which this is communicated? Do you think any of our fevers, except the eruptive fevers, are communicated with such facility and such intensity as this is?—No; I may say as regards fevers that we generally find that post-mortem appearances show certain glands called Peyer's glands diseased or ulcerated. I have seen the dissections of animals that have died from this disease in which there has not been the slightest affection of the glands.

5112. That you have observed?—Yes; whilst on the contrary in some of Mr. Way's healthiest and best cows I have seen the Peyer's glands in a chronic state of disease.

5113. (*Chairman.*) Have you seen much of the different modes of treatment in Marylebone?—Yes; I have seen several plans, but I never saw the slightest beneficial results from any one of them.

The witness withdrew.

THOMAS HILLIER, Esq., M.D., examined.

T. Hillier, Esq., M.D.

7 Dec. 1865.

5114 (*Chairman.*) You are I think the medical officer of health in St. Pancras?—I am.

5115. Would you state when the first cases of the Cattle Plague broke out in your district of St. Pancras?—I have not been able to define the exact date, but it was very early in July, as far as I can ascertain; in the shed of a man of the name of Smith of College Street West, Camden Town, who bought a Dutch cow in the Metropolitan Market. This cow fell ill within a very short period, but he cannot define exactly the date. Of the remainder of his stock, five in number, four fell ill almost at the same time; so nearly that he cannot define the dates. He has kept no memoranda, but they all died, with the exception of one, within a week of his having purchased the stock; and very nearly at the same time other cases occurred the origin of which I was not able so well to trace. It was at the period when the thing was kept very quiet among the cowkeepers, and all was done by stealth.

5116. But these were not such early cases as those which you have heard spoken of by the former witnesses?—There were none so early as either the cases in Islington or in Marylebone. They must have been a few days later.

5117. Do you believe that the disease could have been generated in the cowsheds themselves in your neighbourhood without contagion?—I have no reason to think so. My experience is quite in the opposite direction. Very many of the best sheds in the district have suffered extremely, and some very bad sheds have escaped up to the present time.

5118. In what condition are the sheds, generally speaking, in St. Pancras?—We have some of all kinds. There are some very good, some very bad, and some of moderate quality.

5119. Has there been any improvement of late years since the licensing system was introduced?—Yes; there has been a very decided improvement as compared with the state of things five years ago.

5120. Are there similar regulations in force in your district to those which have been mentioned by Dr. Ballard and Dr. Whitmore?—Yes; we have similar regulations, but we have great difficulty in enforcing those regulations; the poverty of the cowkeepers is taken into consideration very much, and personal considerations are often allowed to have great weight. I may observe that there is no one whose duty it is to prevent a cowkeeper from keeping cows without a licence. It is no one's positive duty. There is no prosecutor named in that section of the Act of Parliament.

5121. Is it not the duty of the police to inquire into it?—No; it is not the duty of the police. I have represented to my board that I thought a memorial should be made to the Government or to some authorities on the subject urging the propriety of the police being the prosecutors.

5122. In the cases of those sheds which have been exempt from the disease, can you trace any reason for the exemption?—There are 36 sheds in which the disease has not made its appearance, out of about 100 in the parish. The only thing that those sheds have in common that I can ascertain is that no new cows have been put into them. There are some very good and some very bad that have escaped; but none in which a large number of cows have been kept have escaped. The largest number kept in a shed which has escaped was 30; there have been some of 25 or of 20 and smaller numbers; but all the largest sheds have suffered; and the only point common to all that have escaped is that the owners have not bought stock, and for the most part that they have observed very strict precautions as to the admission of strangers.

5123. Have you made particular inquiries as to the cause of the immunity in those 36 sheds that you have mentioned?—So far as to ascertain that no new stock has been bought. I have not gone beyond that in my inquiries as regards very many of them.

5124. Have you a great number of slaughter-houses in your district?—I think there are 98 slaughter-houses in the parish.

5125. Do you consider that the existence of those slaughter-houses tends in any way to prevent the discovery of contagious disorders?—It prevents the discovery of diseased meat. I think it gives facilities for the disposal of diseased meat as human food. I know that during the earlier period of the disease raging in London, the great majority of the cattle were disposed of for human food. All that did not die very rapidly were disposed of in that way.

5126. Were they slaughtered at those private slaughter-houses?—It is impossible to say where they were slaughtered. That is the difficulty in the matter. These slaughter-houses are so numerous that it is difficult to trace them. I do not think that many of them were slaughtered in our parish, because we kept a very careful watch. I think that a great many went to the east end of London. Of course each parish tries to throw it on to its neighbours. It is impossible to thoroughly inspect the slaughter-houses at the time of slaughtering in consequence of their number.

5127. You would be in favour of diminishing the number of those slaughter-houses, and having certain specified ones?—Yes. I know that different districts vary very much in the strictness with which they require the regulations to be carried out, and the salesmen soon find out the districts in which the regulations are relaxed, and to those districts the diseased animals are sent.

5128. Where the regulations are strict and thoroughly enforced the disease can very readily be detected in the carcase, can it not?—If the viscera of the animal are inspected it can be detected, but not otherwise. It is very important that the carcases of the animals should be inspected at the time of their being slaughtered in order that all the viscera may be seen.

5129. (*Dr. Quain.*) Have you any suggestion to make yourself with regard to the slaughter-houses or cowsheds?—With reference to the licensing of the cowsheds, I do not think that the system works well, for the same reason that I have mentioned with regard to the slaughter-houses, that the principles which guide the local boards in different parts of the metropolis vary so much, some being very strict and others very lax. I know one district in which unlicensed cowhouses have been suffered to be established, and now exist. There are some five or six such cowhouses in one of the most crowded districts of London in which cows are kept; and although the medical officer has represented the desirability of instituting prosecutions, there is no one whose duty it is, or at any rate who considers it to be his duty, to prosecute.

5130. (*Dr. Parkes.*) Do you consider it advisable to remove the cowhouses from London?—From all the more crowded districts. I do not think it necessary to remove them from all the Metropolitan Police

District, because there are parts even of St. Pancras where cows may be kept quite as well as anywhere within 20 miles of London.

5131. In comparatively open spaces?—Yes; there are some comparatively open spaces.

5132. Those spaces might, however, be built upon at some future time?—Yes; there should be regulations as to the neighbourhood of houses and highways.

5133. If those spaces were built upon they would become unsuitable for cowsheds?—Yes.

5134. Have you been able to trace any effect of the diseased meat upon the health of the people who have eaten it?—No; I have not got any facts upon that subject.

5135. Have you any negative facts showing that the meat has been eaten without any bad effects?—No; not more than that I know a great amount of meat has been eaten, and I have not heard of any bad effects.

5136. Have you any facts with regard to the milk from diseased animals?—I have not got any facts about that. The cowkeepers state that they throw the milk from diseased cows away. The only fear, I think, is in regard to the cases in which the cows recover, because the milk is said to come back again very soon. But that applies only to the few cases when a cow recovers. It is a very peculiar feature in the disease, what a rapid course it runs, and how soon the animal is restored.

5137. The cows give more milk afterwards than before, do they not?—I do not know that.

5138. (*Dr. Quain.*) Do you say that fat cattle are destroyed quickly, or do you speak only of cows?—I speak of cows. I have had no experience of fat cattle.

5139. (*Dr. Parkes.*) Have you had any experience as to the best kind of disinfectants?—No; I cannot say much upon that point. The chief one used has been chloride of lime. In some cases where cattle have been brought back to the sheds in which the disease had already been after they have been disinfected they have escaped. In one case the shed has been disused for two months, and then cattle have been brought back again, and the disease has broken out. In those cases it appears to be attributable to the previously infected state of the shed.

5140. Had disinfectants been used there?—Yes.

5141. Had they been properly used?—Yes; it was stated so; but I have no personal knowledge of that.

5142. (*Mr. Ceely.*) Have you paid any attention to the pathology of the cattle disease?—I have seen a certain number of dissections.

5143. Have you formed any idea of the character of the disease from its pathology?—It appears to me to be a disease sui generis.

5144. Do you think it approaches to an eruptive fever?—I think it is more of that character, a great deal, than typhoid. I do not think it has any relation at all to typhoid fever. It resembles typhus in being a very depressing disease, but not otherwise.

5145. You see no reason for thinking it to be of a typhus or typhoid character?—I see no relation to those diseases. The anatomical character of it is very different, also the course of the disease, and the circumstances with respect to contagion.

5146. You refer to the manner of its propagation?—Yes; the manner of its propagation by contagion.

5147. Have you seen any eruption succeed the convalescence of an animal in the protracted cases of attack?—Yes; in several cases I have seen an eruption near the vagina.

5148. Can you define the eruption?—It has been papular, and red; there were small papules.

5149. Terminating in crusts?—I have not watched them closely enough to say.

5150. But you observed the papular stage?—Yes.

5151. Where was it?—In the buttocks.

5152. Not upon the head and face and throat?—I have not seen the papules there.

5153. You are satisfied of their being papules, not pustules?—At the time I saw them it was papular certainly.

5154. That was not at an early stage of the disease?—No; it was after the cow had been suffering for several days.

5155. You did not trace it to its conclusion in order to see whether it was papular or pustular?—No, I did not.

5156. Did you not observe any incrustations afterwards on the surface of those papules?—No; I cannot say that I did.

5157. You did not follow it up well?—Not minutely.

5158. But in cases in which you observed the papules the disease was in a late stage?—Yes; it was a late stage of the disease. I have noticed a redness of the vagina at an early period.

5159. Your opinion is, that the disease is of the nature of an eruptive fever?—It seems to me to be more allied to the eruptive fevers than anything else.

5160. It is unlike typhus and typhoid in its manner of propagation?—Yes; it is much more contagious, certainly, than typhus or typhoid.

5161. (*Chairman.*) Have you had any experience in the treatment of the disease at all?—I cannot say that I have. I have heard of cows recovering upon every possible plan of treatment, and also of their dying upon every possible plan of treatment; but I have heard very few exact facts.

Mr. Thomas Benjamin Way examined.

5162. (*Chairman.*) I believe you are in a rather extensive business in London?—Yes.

5163. As a butcher?—Yes.

5164. Have you considered the subject of altering the mode of carrying on the butchers' trade in London, by turning it more into a dead meat trade?—I have considered it, and to a certain extent carried it out into practice.

5165. Would you state the result of your experience?—The amount of my outlay during the year in the dead meat market is considerably larger than that in the live meat market. My outlay in the last year was between 6,000*l.* and 7,000*l.* in the live meat market, and between 8,000*l.* and 9,000*l.* in the dead meat market. In former years, before we had the railways in operation, we slaughtered nearly double the quantity we do now.

5166. Do you consider that the trade in dead meat is increasing in London?—Very largely.

5167. Do you find that the meat that comes from the country in this way is as good as the meat killed in London?—I give it a decided preference in general; but not wholly, on account of the difficulty of keeping it.

5168. How do you account for the meat coming from the country being better than that killed in London?—It is killed, I imagine, generally in a cooler state, and has not been subject to the excitement that a bullock undergoes in travelling by rail and attending the market, thereby, I think, so far as I have been able to ascertain, losing a portion of its nourishing quality.

5169. We were told by one witness that the meat that came up dead was only fit for a particular kind of consumers; that the consumers at the West End did not like the meat that came up by train; is that the case?—I find it quite the contrary. I find that the country killed meat gives far greater satisfaction

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than the London killed meat. We have not to keep it so long by three or four days as the town killed meat.

5170. Can this business be carried on in the summer as well as in the winter months?—No, it cannot.

5171. It cannot be carried on in the summer?—No.

5172. Then it would be impossible to convert the whole meat trade for London into a dead meat trade altogether?—Utterly impossible.

5173. I understand that in the winter it is probably the best way of doing it?—Great inconvenience would arise from it, but I think it is practicable, certainly.

5174. Have you much experience of the slaughter-houses in the metropolis?—I have seen a great many amongst the larger butchers.

5175. Do you consider that they are carried on in a satisfactory manner?—I think so, so far as I have witnessed; there is great cleanliness in them. That has been the case of late years particularly.

5176. You are speaking of the slaughter-houses of the large butchers?—Yes.

5177. Would your remark apply to the small slaughter-houses?—Not to those where the slaughtering is carried on underground, which it is in some cases. I may say in a few cases; it is by no means general.

5178. Would you wish to see the system of slaughter-houses altered in any way?—*No*; I do not think that they could be improved upon.

5179. Do many animals in an early stage of disease find their way into those slaughter-houses?—I think not.

5180. We are told that a great number of dairymen in London, directly they find they have a disease in their sheds, send the cows away for the purposes of slaughter; do you think that that has been the case?—I do not think so, to any extent. Certainly no respectable butcher would take in a cow under such circumstances.

5181. Then where do you think those cows went?—I imagine they went principally to such places as Maiden Lane, Belle Isle, as it is called, and also into some of the lower neighbourhoods where they have small slaughter-houses. There is a certain class of butchers who would not be particular in taking them.

5182. Would great public inconvenience arise if there were only a certain number of regulated public slaughter houses where all animals should be slaughtered?—Very great inconvenience, and great losses also. The trade itself would be subject to peculation, which we are now subject to to some extent.

5183. How so?—From the very character of the men employed. The peculation takes place in the loss of fat. It is no unusual thing at the present time, even in the private slaughter-houses, to find a man taking away a quantity of fat under his smock frock, and everything of that kind is done.

5184. (*Dr. Quain.*) Your distinct impression is, that the flesh of oxen suffers considerably by lengthened journeys on railways?—It depreciates in quality, and in weight also.

5185. How much is it dimished in weight?—We calculate, and have pretty good authority for our calculation, that an ox will lose one stone a day (that is eight pounds a day) in its transmit, say from Scotland for instance to London. Of course that would apply still more to cattle driven by road.

5186. Are cattle in a more healthy and more profitable condition the nearer they are killed to the place of their pasture?—More profitable to the sellers.

5187. But you think it would be quite impossible to accomplish the slaughter of animals near their pastures in summer time?—I do.

5188. Suppose that an ox was in a pasture within five miles of a railway station 250 miles from London this morning, and he was killed there; could you not have his meat the next morning, and would it not be as good as the meat of animals that had come up alive and been killed in London?—No; we should not have his meat the next morning. In the summer months it would be scarcely cold, and if packed with any heat remaining in the body, the probability is that by the time it had arrived in London for the market it would be in a putrid state.

5189. That is as the arrangements for conveyance exist at present; but if there was a more extensive dead meat market, which would encourage the railways to take proper precautions and proper means, the state of the case would be very much altered, would it not?—I think the greatest expedition is used now by the railways that they possibly can, and yet they cannot deliver the present quantity of meat in proper time for the market; that is the case even with the quantity that comes at the present time.

5190. It is very large, is it not?—Yes.

5191. In fact, at the present moment, the railway arrangements are deficient in supplying the means of carrying dead meat?—They are.

5192. Are there any special arrangements made for the carriage of meat upon any of the great railways; for example, the Great Western Railway?—The Great Western, the London and North-western, and the Great Northern are the principal lines that have arrangements.

5193. What are those arrangements?—I believe they have a particular department for perishable articles; but very frequently the meat is delayed in getting into the markets in consequence of insufficiency of space; perhaps, for example, at the top of Skinner Street and adjoining St. Sepulchre's Church, there will be sometimes as many as eight or ten waggons waiting to deliver meat, and they will be too late for the market.

5194. You are aware that Smithfield will be in communication with all the railways shortly?—Yes.

5195. Would not that obviate much of the inconvenience?—It would obviate that inconvenience to a great extent, certainly.

5196. Are there not vans upon the Great Western Railway fitted up like a butcher's store?—I have not seen any.

5197. (*To Dr. Whitmore.*) Can you answer that question?—They have special vans in which the carcase is hung up precisely as if it were in a butcher's shop.

Mr. Way.—That applies only to the Great Western line, and, indeed, in that case I think it applies only to sheep that have come from Ireland, and are slaughtered at Bristol and sent up from thence.

5198. Leaving home cattle for a moment, and speaking of foreign cattle, you are aware that if the Plague were stayed at this moment there will always be the risk of introducing it into this country from abroad again?—Yes.

5199. And it would become absolutely necessary to prevent foreign cattle being carried into the country, except under quarantine, or as dead meat; would it be impossible to have markets for foreign stock established down at Thames Haven, where the foreign cattle could be sold and slaughtered, and the meat brought up from there?—That could be done; but it would be dividing the market, which we have always considered very prejudicial to the interests both of the public and of the retailer.

5200. But it would be a comparative amount of injury; we should have to consider the Plague on the one hand, and this inconvenience on the other?—Yes.

5201. Is there any other point which you wish to bring before the Commission?—With regard to the cattle being slaughtered in the country, and sent up, supposing it was intended that the supply should

entirely come ready slaughtered to London, I may say that there is scarcely a country town or village where there is a slaughter-house capable of containing more than one or two bullocks. I have been in communication with many of the country people upon that subject, and in Northamptonshire and Leicestershire, and other parts of the country, their slaughter-houses will, perhaps, contain one or two small animals of say 80 stone, of eight pounds to a stone; therefore I think that at present such a system as has been spoken of could not be carried out without increased facilities.

5202. But under the pressure of necessity would it not be possible to get temporary sheds for such a purpose?—Yes; it is done, or was done, even in cow-yards. Biggs in the Edgware Road had a slaughter-house.

5203. (*Dr. Parkes.*) I understand you to say that at the present time half your meat comes up from the country?—Yes.

5204. As dead meat?—If you mean as regards my own purchases, more than half of it comes up in that way.

5205. Is that in the winter only, or in the summer also?—Winter and summer both.

5206. Is there as much sent up in the summer as in the winter?—No, not so much.

5207. Does that refer to cattle and sheep, or to cattle only?—To cattle and sheep.

5208. You individually, supposing you were obliged to do it, could increase that quantity of dead meat perhaps to such an extent as to supply all your trade in that manner?—I could do it, but at considerably increased expense.

5209. Why so?—I should require additional horses and carts, and manual labour also.

5210. To carry the meat?—Yes.

5211. What additional expense would that give you, do you suppose?—The expense of two horses and carts to begin with.

5212. It would apply to half your meat?—Yes.

5213. Would it increase the price per pound, do you think, sensibly?—It would increase my expenses by nearly 300*l.* a year; certainly by more than 200*l.*

5214. You would have to raise the price of meat, then?—I should have to charge it of course to the customer.

5215. How much would it increase the price per pound?—I cannot say as to the rate per pound.

5216. Would it be a very alarming increase?—No. Not an alarming increase, but an increase that would be very unwillingly borne, I presume.

5217. A halfpenny or one penny per pound?—I should say a halfpenny per pound at the least.

5218. Do you suppose that the same thing could be done by other butchers in a large trade like yourself?—Yes.

5219. Do they all, in the same way as yourself, get up a quantity of meat from the country now?—Yes; there are butchers in London doing about the same amount of business as myself who never kill anything.

5220. Do they get the whole of their meat from the country?—They get the whole of their meat from the dead meat markets.

5221. Which meat is killed in the country?—Yes; it is killed in Scotland, or wherever it may be.

5222. And sent up by railway?—Yes.

5223. Do I understand that the dead meat market is supplied entirely by country animals?—Yes; almost entirely, excepting as regards calves and cattle sold by the carcase butchers.

5224. You say that the trade is increasing very largely?—Very largely. I should say that within the last 20 years it has increased four fold.

5225. Can you give any idea as regards the general trade? How much of the meat is supplied from the dead meat market, in the way you have described, in London; is it one fourth or one third?—It is more than that.

5226. We already derive more than one third of our supply then from the animals killed in the country?—Yes.

5227. We also derive, I presume, a large amount of our supply from foreign animals killed in London?—Yes.

5228. What amount do we derive from English cattle sent up to London and killed there?—I should think 2,000 head a week is about the average.

5229. What per-centage would that be upon the gross supply?—Our cattle market averages I should say 5,500 head a week.

5230. Then out of 5,500 there are about 2,000 English?—Yes.

5231. They are killed in London?—Yes; in London and the suburbs; but there are times of the year when we have butchers from Birmingham and Manchester and other country towns buying in London, and taking them to those parts of the country.

5232. Is it not the case now, that the country butchers are offering to send meat up to London to private customers?—Yes; I have heard of it.

5233. Is it done to any extent?—No; only to a small extent.

5234. But the offers have been made, have they not?—Yes, such offers have been made.

5235. Would there be any difficulty in increasing the supply from that source?—I do not see any difficulty in it myself. The difficulty would be, I think, more with the consumer than with the butcher.

5236. So that a country butcher who does not supply London at all, living 30 or 40 miles from London, could increase very largely the supply in that way?—I do not think he could supply at a more reasonable rate than a London butcher.

5237. Still he might supply meat?—Yes.

5238. Supposing there was an imperative necessity of stopping the entrance of live cattle into London from English country places, and admitting only foreign cattle, to be killed in London immediately on their arrival, do you apprehend that it would lead to any real scarcity of meat in London?—No; if we might calculate upon a regular supply.

5239. At some increase in price?—Yes, at an increased price.

5240. But without any great increase in price?—The increase would not be great.

5241. And you would not be alarmed at such a rule?—No, not for a short period; and I think I might speak for the trade in that matter.

5242. You think that they would not view with alarm a regulation of that kind?—No. I have not been in communication with them; but I do not see any reason why they should, seeing that butchers who are now carrying on a large trade are supplied with their meat entirely from the dead meat markets.

5243. (*Mr. Ceely.*) What do you consider to be the characteristics of healthy meat in contra-distinction to those of the meat of animals that have died from the present disease?—It is apparent to a practised eye. It is distinguishable by the grain of the meat, and the juices that come from it also.

5244. I mean how can it be distinguished at a primâ facie view of it,—a simple inspection of it; would its colour have something to do with it?—Its colour would have a great deal to do with it, and its firmness also.

5245. But that firmness does not continue, I think? The firmness will be almost the same in warm weather as in cold weather in well-fed animals.

5246. In the case of an animal dying of this disease, do you expect to find the muscles become rigid very soon?—I should think not. I should think they would be rather flaccid.

5247. You would be rather surprised to find that that was the case?—Yes.

5248. You would look upon the rigidity of the

Mr. T.B. Way.

7 Dec. 1865.

muscles, what you call the stiffening of the muscles, as a test of healthy meat?—Yes.*

5249. Does that take place with animals which have suffered with this disease?—I have not seen this diseased meat, so as to be able to judge. I was pointing out the difference in the qualities of meat only this day to Dr. Whitmore. If you place on a slab a round of beef of a really well-fed animal such as I showed him (in that instance it was a Scotch beast), in the course of an hour or so you will find that from that piece of beef a large quantity of the juice of the meat, the gravy, will have exuded. You will not find that in either a second-rate or a third-rate beast.

5250. (*Dr. Parkes.*) Is that a red juice?—Yes; it is not blood, but really the juices of the meat.

5251. There really is more of that juice, I suppose, in good meat, than in an inferior quality?—You find scarcely any of it in the second-rate meat; in the third-rate or very inferior meat you find none at all.

5252. (*Mr. Ceely.*) It is a drier article?—Yes; a drier article.

5253. (*Chairman.*) Is there anything else that you would wish to state to the Commission?—No.

The witnesses withdrew.

Adjourned.

* The witness subsequently added the following remark:—
"The answers to these three questions" (5246, 5247, and 5248) "were given under the idea at the time that Mr. Ceely "referred to the flesh of the animal, and not to the muscles."

APPENDIX.

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APPENDIX A.

COMMUNICATIONS between HER MAJESTY'S GOVERNMENT and FOREIGN GOVERNMENTS respecting the Examination of Foreign Cattle at Ports of Exportation.

SIR, Foreign Office, August 11, 1865.

I ENCLOSE, for the information of the Lords of the Most Honourable Privy Council, a copy of an instruction which, in compliance with the request contained in your letter of the 5th instant, Lord Russell has addressed to Her Majesty's representatives at St. Petersburg, Stockholm, Copenhagen, Hanover, Hamburg, the Hague, and Brussels, requesting them to obtain from the Governments of their respective countries a careful inspection at their outports of all cattle shipped for any port of Great Britain, with a view to the prevention of the exportation into this country of infected cattle.

I am, Sir,
Your most obedient humble servant,
A. H. LAYARD.

The Clerk of the Council in Waiting.

Enclosure.

SIR Foreign Office, August 5, 1865.

[MY LORD,] I TRANSMIT to you herewith a copy of a letter which has been received from the Council Office, urging the expediency of arrangements being made by the Governments of those countries in the north of Europe in which the Cattle Plague exists to ensure a careful inspection at their outports of all cattle shipped for any port of Great Britain.

I have to instruct you, in accordance with the terms of this letter, to make a representation to the Russian [Swedish, Danish, Hanoverian, Hanse Towns, Netherlands, Belgian] Government, with a view to inducing them to adopt such measures as may be best fitted to prevent the export of diseased cattle from their country to Great Britain.

I am, &c.
(Signed) RUSSELL.

J. S. Lumley, Esq., St. Petersburgh.

[F. Hamilton, Esq., Stockholm.
Sir A. Paget, K.C.B., Copenhagen.
W. Doria, Esq., Hanover.
J. Ward, Esq., Hamburg.
Sir J. Milbanke, Bart., the Hague.
Lord Howard de Walden and Seaford, Brussels.]

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1. RUSSIA.

MY LORD, St. Petersburg, August 11, 1865.

ON the receipt of your Lordship's despatch, No. 24, of the 6th instant, I addressed a note to the Acting Assistant Minister for Foreign Affairs (together with a copy of the letter addressed to your Lordship by the Council Office of the same date), urging the Imperial Government to establish regulations for the strict inspection of cattle at the ports of export, with the view of preventing the spread of the Cattle Plague in England, by the adoption of which it is hoped the desired aim may be obtained, with the least inconvenience to the trade of the two countries.

I have; &c.
(Signed) J. SAVILE LUMLEY.

P.S.—I have since spoken to M. de Westmann on the subject, and his Excellency said, although a Cattle Plague certainly did exist in Russia, he did not believe that it could have been introduced into England from hence, as Russia did not export cattle to England, but, on the contrary, imported English cattle.

(Signed) J. S. L.

The Earl Russell, K.G.
&c. &c. &c.

MY LORD, St. Petersburg, August 27, 1865.

I RECEIVED a note to day from the Minister of the Interior, begging me to call on him, as he wished to speak to me on the subject of the measures he had caused to be taken in consequence of the suggestions I had made on the part of Her Majesty's Government for the prevention of the spread of the Cattle Plague.

I saw his Excellency this afternoon, and he informed me that, knowing how great was the interest taken by Her Majesty's Government on this question, he had without loss of time telegraphed to the authorities of the Maritime Governments of the Empire, requesting that not a single head of cattle should be allowed to leave the country without having passed a strict examination, and without a certificate of health from the veterinary surgeon appointed for that purpose; and he had requested the Minister of Finance to give the necessary orders at the different custom houses that this regulation should be strictly attended to. His jurisdiction, his Excellency said, did not extend to the Kingdom of Poland and the Grand Duchy of Finland; but he had communicated to the principal authorities of those Governments the steps he had taken, and he had no doubt they would adopt similar measures of precaution.

His Excellency informed me also that he had ordered statistical information to be drawn up, showing the number of animals of every description exported from Russia during the past and the present year, as well as tables showing the number of animals that had been attacked by the Rinderpest in each Government, and that as soon as these statistics were ready he would communicate them to me unofficially, and which he hoped would tend to allay the

alarm that existed with reference to the supposed exportation of diseased cattle from Russia to England.

From some of these tables, already in the possession of his Excellency, it appears that the Rinderpest has been most prevalent in the ports of Wilna and Kownow, the exportation from which (if any has taken place of cattle to England) would be through the Prussian ports of Memel, Tilsit, or Dantzig, and not through any Russian port.

M. de Walnieff again expressed his belief that on investigation it would be found either that the disease had arisen from local causes in England, or that, if imported, it must have been from ports nearer to England than those of the Baltic provinces.

M. de Walnieff said, however, that he thought it right to call my attention to the fact that this disease could be communicated by the introduction of the hides and hair of cattle that had died of the Rinderpest. He had given strict orders that the skins of all such animals should be burnt, and he did not think that any hides of diseased animals were now exported from Russia, but he thought it right this circumstance should be brought to the notice of Her Majesty's Government. I thanked M. Walnieff for the very obliging readiness with which he had met the wishes of Her Majesty's Government, and which I assured his Excellency would be highly appreciated by your Lordship.

I have, &c.
(Signed) J. SAVILE LUMLEY.

The Earl Russell, K.G.
&c. &c. &c.

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2. DENMARK.

SIR, Foreign Office, September 20, 1865.

I AM directed by Earl Russell to request that you will acquaint the Lord President of the Council that the Danish Minister called this morning at the Foreign Office, and stated to me that the Cattle Disease had not made its appearance in Denmark, but that nevertheless the greatest attention would be paid to the cleanliness of vessels employed in the transport of cattle from Denmark to British ports.

I have the honour to be,
Sir,
Your most obedient
humble Servant,
E. HAMMOND.

The Clerk of the Council.

MY LORD, Copenhagen, September 16, 1865.

WITH reference to my despatch No. 90 of the 17th ultimo, on the subject of the exportation of cattle from Denmark to England, I have now the honour to enclose an extract from the Berlingske Tidende of the 15th instant, containing the circular which in consequence of my representations has been addressed by the Minister of the Interior to the chiefs of the police in the various districts, desiring them to take measures for preventing the exportation of any diseased cattle from Danish ports to England.

I have, &c.
(Signed) A. PAGET.

Earl Russell, K.G.

Enclosure 1.

Le ministère de l'intérieur vient d'adresser au Directeur de la police de Copenhague et à tous baillis la circulaire suivante :

Monsieur,

A l'occasion de la peste bovine qui sévit en ce moment en Angleterre, le cabinet anglais a exprimé au gouvernement danois le désir qu'un contrôle sévère soit exercé sur tout le bétail qui s'expédie de nos ports en Angleterre, afin d'empêcher que, par l'importation d'animaux malades, la contagion ne prenne dans ce pays un développement encore plus grand. Bien qu'il ait tout lieu d'espérer que les renseignements officiels transmis au gouvernement anglais sur l'état sanitaire de nos bêtes à cornes, le convaincront qu'il n'y a pas à craindre qu'aucune espèce d'épizootie soit importée par le bétail d'origine danoise, le ministère croit toutefois qu'il est de l'intérêt même des expéditeurs danois de satisfaire autant que possible au désir du gouvernement anglais, tant pour éviter qu'il ne s'élève des difficultés au lieu de débarquement, que parceque, à cause de la méfiance qui règne actuellement en Angleterre contre tout bétail de provenance étrangère, il importe plus que jamais que celui qui vient du Danemark y arrive dans un état parfaitement sain. Le ministère regarde par conséquent comme nécessaire que, jusqu'à nouvel ordre, il ne soit pas expédié de bestiaux en Angleterre sans qu'ils aient été examinés par un vétérinaire autorisé, dont le certificat, constatant leur bon état de santé, devra les accompagner, et il croit en outre devoir recommander aux expéditeurs de ne pas embarquer le bétail, avant de s'être bien assurés que les navires destinés à le recevoir ont été convenablement purifiés, que le fumier provenant des voyages précédents a été complètement enlevé, que la ventilation est suffisante, que le nombre d'animaux à expédier n'excède pas la place dont on peut disposer, et qu'on a pris les mesures nécessaires pour que, pendant la traversée, ils soient bien approvisionnés d'eau et de fourrage, et soignés par des gens spéciaux affectés à ce service.

Vous êtes invité à porter le contenu de cette circulaire à la connaissance de vos administrés, et, en particulier, des personnes qui s'occupent de l'expédition des bestiaux en Angleterre, ainsi que des capitaines des navires qui en effectuent le transport.

Enclosure 2.

Copenhague,
M. LE CHEVALIER, Le 16 Septembre 1865.

LE Ministre de l'Interieur, que je me suis empressé d'informer de la teneur de votre note du 8 du mois passé relative au contrôle à exercer sur le bétail qu'on exporte de ports danois en Angleterre, vient de me communiquer que, depuis nombre d'années, les bêtes à corne en Danemark n'ont été attaquées d'aucune maladie contagieuse, à l'exception de la pleuro-pneumonie insudative, qui de temps en temps s'est spontanément manifestée ici. Bien que par cette raison il n'y ait pas lieu pour le Gouvernement de Sa Majesté Britannique de craindre que des maladies de la nature indiquée soient introduites en Angleterre par l'importation de bétail de provenance danoise, le Ministre de l'Interieur toutefois, afin de satisfaire autant que possible au désir exprimé dans votre susdite note, s'est décidé à adresser au Directeur de la Police de Copenhague et à tous les baillis de la province la circulaire ci-jointe sur les précautions à prendre pour que le bétail exporté des états du Roi en Angleterre y arrive dans un état parfaitement sain.

En vous priant de bien vouloir porter les dispositions de cette circulaire à la connaissance de votre Gouvernement je profite, &c.

Sir Augustus Paget. (Signed) BLUHME.

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3. HANOVER.

MY LORD, Hanover, 28th December 1865.

WITH reference to Mr. Doria's Despatch, No. 37, of the 14th of October last, I have the honour to enclose a copy and translation of a note of the 21st inst., together with its enclosures in original, which I have received from Count Platen, transmitting (in answer to the note addressed to him by Mr. Doria in execution of the instructions contained in Earl Russell's Circular Despatch, No. 23, of the 9th of October last) duplicate copies of Hanoverian regulations relative to cattle diseases.

Your Lordship will perceive from Count Platen's note that none of these regulations at present apply to the Cattle Plague, but that the question of extending to it the law of the 23d of August 1855 concerning the Lung Disease in East Friesland (which forms the 1st enclosure in his note) is now under consideration.

Of this law I have the honour of enclosing herewith a translation by Mr. Cope.*

There is, I should observe, no evidence of the Cattle Plague (or Rinderpest, as it is called in German) having made its appearance in this country.

I have, &c.
The Earl of Clarendon. (Signed) HENRY F. HOWARD.

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4. HAMBURG AND BREMEN.

MY LORD, Hamburg, August 24, 1865.

I HAVE the honour to transmit herewith to your Lordship the translation of a note which I have this day received from the senator, Dr. Rücker, in answer to my communication as to the precautions to be taken for insuring the examination of cattle shipped at Hamburg for British ports.

By this note it appears that no symptom of the Cattle Plague has been observed here or in the neighbourhood, but that, nevertheless, orders have been given by the Hamburg Government for the strict examination of all cattle shipped from this port to Great Britain.

I have, &c.
The Earl Russell, (Signed) W. WADDILOVE.
&c. &c.

Enclosure 1. (*Translation.*)

THE note from Mr. Waddilove, Her Britannic Majesty's Consul acting for Her Majesty's Chargé d'Affaires, dated the 9th instant, by which Her Majesty's Government urges

* This law contains nothing relating specifically to exportation of cattle or to inspection at the ports.

the senate, with reference to the Cattle Plague, to adopt measures for insuring a strict examination of all cattle shipped for British ports, has been laid before the senate, and the Under Secretary is accordingly instructed to make the following communication in answer thereto:

According to the report recently drawn up by the medical authorities of this city, the state of health of the animals, and more especially of the cattle in the Hamburg territory, and, so far as can be ascertained, the cattle in Germany and Denmark, is uncommonly favourable; and at this present moment, excepting the usual occasional diseases, no epidemy or local disease (endémie) prevails. Thus, on the part of Hamburg, any precautions would appear to be unnecessary. In order, however, to comply with the wishes of Her Britannic Majesty's Government, the senate has made the arrangement that two authorized and sworn veterinary surgeons, viz., Georg Wilhelm Schrader and G. H. Warneck, shall be authorized to examine the cattle destined from hence for British ports before shipped, and to give certificates as to their state of health. The certificates in question will be made out in the annexed form, and will be attested by the police authorities of the suburb of St. Paul's.

The undersigned, in the hope that Her Britannic Majesty's Government will recognize in the above order a precaution taken against the export of diseased cattle, and receive it as a proof of the willingness of the senate to respond to the desires of Her Majesty's Government, gladly embraces this occasion, &c. &c.

(Signed) A. RÜCKER, Dr.

Hamburg, August 23, 1865.

Enclosure 2. (*Translation.*)

ATTESTATION.

AT the request of Mr. in this city, I have this day examined cattle which are to be shipped by the , Captain , to , in respect of their state of health, and I accordingly truly certify that I have found the whole of the cattle thus to be shipped to be perfectly healthy.

N.N.,
Licensed Veterinary Surgeon,
Sworn for the examination of cattle to be shipped.

Hamburg, Suburb of St. Paul's,
1865.

These are to certify, that the above is the true signature of N.N., Licensed Veterinary Surgeon, and sworn for the examination of cattle to be shipped to British ports, signed by himself.

Witness our hand and seal,

(L.S.) (*Signature*).

Hamburg, Suburb of St. Paul's,
1865.

MY LORD, Hamburg, August 14, 1865.

WITH reference to my despatch of the 9th instant, No. 1, I have now the honour to report to your Lordship that in answer to the representations made by me, in accordance with your Lordship's instructions, to the Government of Bremen, I have received, under date of the 11th instant, a note from the senator at present at the head of the Committee of the Senate for Foreign Affairs, stating that no sign of the Cattle Plague has appeared in Bremen, but that Her Majesty's Government may rest assured that every possible means will be taken to prevent the export of diseased cattle from Bremen ports to Great Britain.

A translation of the note above mentioned is enclosed herewith.

I have the honour to be, with the highest respect,
My Lord,
Your Lordship's most obedient humble servant,
W. WADDIDOVE,
Acting Consul-General.

The Right Hon. Earl Russell, K.G.,
&c. &c. &c.

Enclosure.

THE note dated the 9th instant, which was addressed to this Government by Mr. Waddilove, Her Britannic Majesty's Consul at Hamburg, acting for Her Britannic Majesty's Chargé d'Affaires to the Hanse Towns, respecting the regulations to be made for preventing diseased cattle to be imported into Great Britain from Bremen ports, has, without delay, been brought to the knowledge of the senate; and the undersigned, acting in the absence of the President of the Committee of the Senate for Foreign Affairs, is accordingly instructed to answer the same, as follows:

Neither on the territory of the state of Bremen, nor in the neighbourhood, has any sign of the so-called Cattle Plague (*Rinderpest*) been observed. Her Britannic Majesty's Government may, however, rest assured, that the senate, convinced of the importance of this object for the well-being and health of the population of England, will keep the same seriously within its view; and in case any signs of the said disease should appear within the Bremen territory, or a well-founded fear of the export of diseased cattle from Bremen ports should arise, the port authorities will be instructed to watch with the greatest possible care over the export of cattle, and to prevent the export of diseased cattle.

The undersigned, &c., &c.

(Signed) J. H. SMIDT.

Bremen, 11th August 1865.

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5. THE NETHERLANDS.

MY LORD, The Hague, August 31, 1865.

I HAVE the honour to forward herewith copy of a note signed, in the absence of the Minister, by the Secretary General of the Foreign Department, which contains, the reply of the Netherlands Government to the representation addressed to it by me in obedience to the instructions contained in your despatch No. 42 of the 5th instant, with a view to inducing the adoption of measures for preventing the export of diseased cattle from this country to Great Britain.

I have, &c.

The Earl Russell, K.G., &c. &c. (Signed) J. R. MILBANKE.

Enclosure.

La Haye, le 30 Août 1865.

LE soussigné, Ministre des Affaires Etrangères, a l'honneur de porter à la connaissance de Sir John Milbanke, Envoyé Extraordinaire et Ministre Plenipotentiaire de Sa Majesté Britannique, qu'a l'époque de la note que Sir J. Milbanke a bien vouler adresser au soussigné à la date du 7 de ce mois, il n'était pas connu au Ministère de l'Intérieur que l'epizootie régnant en Angleterre se fût étendue aux Pays-Bas.

Il résulte toutefois d'une communication du commissaire du Roi dans la Hollande méridionale qu'une maladie observée sur des bestiaux aux environs de Delft y a été propagée par du bétail revenu d'Angleterre, qui, par suite de la baisse de prix, n'avait pas été vendu au marché de Londres, et avait été ramené après un séjour de quelques jours dans cette capitale.

Un professeur de l'école vétérinaire a de suite été chargé d'observer la nature de la maladie, et les commissaires du Roi dans les provinces ont été invités a recommander aux autorités communales de faire appliquer avec sévérité les dispositions du Code pénal.

Cette mesure, si elle est rigoureusement observée, parait rendre inutile de defendre l'exportation de bétail pour l'Angleterre, defense qui du reste aurait peu de résultats, tandisque le but sera bien plus sûrement atteint au moyen d'une vigilance active contre l'importation de bestiaux malades.

Une commission de vétérinaires a été nommée pour inspecter le bétail et assister les autorités communales dans l'observation des dispositions pénales, ainsi que pour rechercher la nature de l'épizootie et faire un rapport tant à ce sujet que relativement aux mesures à prendre pour empêcher la propagation de la maladie.

Le soussigné saisit cettre occasion, etc.

Pour le Ministre,
Le Secretaire Général,
(Signed) A. NIJLTENHOOREN.

Sir J. R. Milbanke.

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6. BELGIUM.

MY LORD, Brussels, August 7, 1865.

ON the receipt of your Lordship's despatch No. 36, of the 25th ult., in conformity to the instructions conveyed to me therein, I at once addressed a note to M. Rogier, and have to-day had a conversation with him on the subject of the inspection of cattle which it is desired to establish on exportation from Belgian ports.

M. Rogier was sensible of the importance of such measures. He said that the Government was prepared to take the matter into serious consideration; but that he was not sure how far the administrative sanitary control over local meat and cattle markets could be extended to the supervision of animals destined for exportation.

His Excellency, however, thought it very desirable that something should be done in the sense suggested by Her

Majesty's Government, and assured me that he would lose no time in letting me know what could be effected.

M. Rogier expressed a hope that measures of inspection on the exportation of cattle might become general throughout Europe.

I have, &c.
(Signed) HOWARD DE WALDEN.

The Earl Russell, K.G.,
&c. &c.

Enclosure.

M. LE MINISTRE, Brussels, August 5, 1865.

YOUR Excellency is no doubt aware that a destructive and highly infectious disease has made its appearance among the cattle in and about London. Its character is novel, and there appears reason to believe that it has been introduced by cattle imported from foreign countries.

Under these circumstances it becomes a duty for Her Majesty's Government to take into consideration measures which may tend to check the further development of this plague; and, obviously, one of the most urgent is to institute some control over the importation of cattle, with a view to ensure, so far as it may be possible, their sanitary condition before being allowed to be landed. Stringent resolutions of this nature, if enforced only at the port of disembarkation, must tend to cripple the trade with foreign countries.

Under these circumstances, I have received instructions to submit to your Excellency the prudence as well as policy, in the interest of the two countries, of adopting in Belgian ports such measures of inspection, and possibly of detention, of cattle, as the case may be, as may give confidence to the public in general, by a well-grounded assurance that every effort is being made to prevent the export of diseased cattle.

The adoption of such a course might be sufficient to induce Her Majesty's Government to forego having recourse to extreme measures of restriction which may otherwise be deemed necessary, to prevent the introduction and spreading of the disease, but which could not fail in their operation to prove exceedingly injurious to the foreign cattle trade.

I avail, &c.
(Signed) HOWARD DE WALDEN.

M. M. C. Rogier.

APPENDIX B.

CORRESPONDENCE on INSPECTION, &c. of IMPORTED CATTLE and on CONVEYANCE of CATTLE by SEA.

I.—CORRESPONDENCE WITH THE BOARD OF CUSTOMS.

Cattle Plague Commission,
House of Commons (Principal Floor, Room 10),
Westminster, S.W.,
27th November 1865.

SIR,

THE Cattle Plague Commissioners would be glad to obtain more particular information than they at present possess on some points connected with the importation of cattle into the United Kingdom.

1. They would be glad to be furnished with a copy of the Instructions under which the veterinary inspectors appointed by the Board of Customs act in the performance of their duties, and to know whether any and what periodical reports are sent in by these inspectors to the Board.

2. They wish to know whether at the principal ports of importation adequate facilities exist, or could be provided, for slaughtering or detaining, during a period of quarantine, diseased or suspected animals. Fat stock are of course injured in value by being either detained or slaughtered in unsuitable places. Would there be any difficulty, in the opinion of the Board of Customs, in confining the importation of cattle to ports where such facilities exist, or could be provided, at or in the immediate vicinity of the wharves or landing places?

3. Veterinary surgeons have, as the Cattle Plague Commissioners are aware, been appointed inspectors at almost all of the ports of the United Kingdom. In the opinion of the Board of Customs, has sufficient provision been made for securing prompt and thoroughly competent inspection at all the ports, and can reliance be placed on such provision being made in future? If not, would there be difficulty in confining the importation of cattle to places where such provision could always be made?

4. Are there, at all the ports, places where animals arriving after nightfall, or when the inspector is not on the spot, can be kept without injury, and is provision made for their being fed and watered while so detained?

5. The Commissioners further desire to learn whether any regulations have been made by authority to secure the thorough cleansing and disinfecting, after every voyage, of vessels employed in the cattle trade, to prevent the animals from being overcrowded, and to ensure their being fed and watered at proper intervals; if not, they would be glad to know whether any such regulations could, in the opinion of the Board, advantageously be made, and by what authority.

The Commissioners will be happy to receive such information on the points above specified as it may be in the power of the Board of Customs to afford, in any manner which the Board may judge most convenient. Should they, after receiving answers in writing, desire further oral information, they will ask the favour of your attendance here or for that of some officer of your Board.

I am, &c.
MOUNTAGUE BERNARD.

Right Hon.
Sir Thos. Fremantle, Bart., &c.,
Chairman of the Board of Customs.

Custom House, E.C.
6th December 1865.

SIR,

THE Chairman having laid before the Board your letter dated the 27th ultimo, signifying the desire of the Cattle Plague Commissioners to obtain more particular information than they at present possess on some points connected with the importation of cattle into the United Kingdom;

I am desired by the Board to furnish for the information of the Cattle Plague Commissioners the following explanation on the several points referred to in your letter, viz.—

First.—The request of the Commissioners to be furnished with a copy of the instructions under which the veterinary inspectors appointed by this Board act in the performance of their duties, and whether any and what periodical reports are sent in by these inspectors to the Board.

I beg to state that the Board act in this matter under directions from Her Majesty's Privy Council, and they transmit for the guidance of their officers and the veterinary surgeons employed at the outports, copies of such orders as the Board receive from the Lords of the Council; but that no special instructions have been issued by the Board to veterinary surgeons, inasmuch as these gentlemen, as members of the College of Veterinary Surgeons, are presumed to be competent to decide as to the proper mode of examination and inspection, and the Board have not interfered with the discharge of the professional duties of the inspectors by giving them special instructions or regulations.

Periodical reports are not made to the Board by the veterinary surgeons.

Secondly.—Whether at the principal ports of importation adequate facilities exist, or could be provided, for slaughtering or detaining, during a period of quarantine, diseased or suspected animals:

Whether there would be any difficulty, in the opinion of the Board of Customs, in confining the importation of cattle to ports where such facilities exist or could be provided.

The Board are not in possession of sufficient information to enable them to reply definitely to this inquiry, but they are not aware of any instance in which it has been found impracticable to detain cattle which the inspectors at an outport deemed it necessary to keep for further examination. And

So far as the Board of Customs are concerned, there would be no difficulty

in confining the importation to certain selected ports, and it would lessen the responsibilities of their officers; but such a regulation must be made by an Order in Council, and might give rise to complaints from persons engaged in the cattle trade at ports deprived of the privilege.

Thirdly.—Veterinary surgeons have, as the Commissioners are aware, been appointed inspectors at almost all the ports of the United Kingdom. In the opinion of the Board of Customs has sufficient provision been made for securing prompt and thoroughly competent inspection at all the ports, and can reliance be placed on such provision being made in future?

If not, would there be difficulty in confining the importation of cattle to places where such provision could always be made?

At the principal outports the inspectors hold diplomas from the College of Veterinary Surgeons, and the Board have no reason therefore to doubt their professional ability to make a competent examination and inspection; nor have the Board any reason to think that at the smaller ports every practicable care will not be taken to carry out the Orders of the Lords of the Privy Council; but at some of these ports it has been found impossible to secure the aid of inpectors with the same professional knowledge as at the larger outports and in London.

In December 1863, in consequence of an irregularity in the passing of some cattle at an outport, a repetition of which the Board at once took measures to prevent, the Board contemplated issuing some more detailed general regulations in regard to the examination of cattle and sheep, including, amongst other regulations, the providing at each landing-place sufficient space for examination, so that if more than one cargo arrived at a time each cargo might be kept distinct and separate.

These regulations were to have applied to London as well as the outports; but much opposition was made to their adoption by some of the London wharfingers, who appealed to the Board of Trade against the proposed regulations, and it was deemed inadvisable to proceed further in the matter, more particularly as at that time Bills were before Parliament for enacting further legal provisions regulating the importation of cattle, and the whole question was under the consideration of the Government.

There would not be any difficulty, so far as the Customs Department is concerned, in confining the importation of cattle to places where every requisite ordered by Her Majesty's Privy Council shall have been provided.

Fourthly.—Are there, at all the ports, places where animals arriving after nightfall, or when the inspector is not on the spot, can be kept without injury; and is provision made for their being fed and watered while so detained?

The Board have not sufficient information to enable them to reply fully to this inquiry.

As regards the enforcement by the officers of Customs that cattle be watered and fed, it would, as the Board apprehend, require either legal enactment or an Order in Council to enforce such a regulation; and as the importers are pecuniarily interested in the lives of the beasts they have imported, it is a question whether it might not be safely left to the parties most interested.

The Board, in consequence of a letter from the Privy Council, dated the 8th September last, called on the proprietors of wharves in London at which cattle are landed to provide water, and urged on them to make arrangements to provide food.

As the premises in London where the principal portion of the cattle are landed are sufferance wharves, to which the privilege of landing can only be granted under special orders of the Board, the Board had the power to withdraw the privilege, if the conditions which they thought fit to impose as to feeding and watering cattle were not complied with. But at the outports, where legal quays have been set out under the Customs laws for the landing of goods from foreign [ports], including cattle, if the cattle are landed at the legal quay the Board have no power to impose conditions on the importers of cattle, in the absence of an Order of Her Majesty in Council or other legal enactment.

Fifthly. — The Commissioners further desire to learn whether any regulations have been made by authority to secure the cleansing or disinfecting after every voyage of vessels employed in the cattle trade, to prevent the animals from being overcrowded, and to insure their being fed and watered at proper intervals. If not, whether any such regulations could, in the opinion of the Board, advantageously be made, and by what authority.

No regulations on this point have been made.

On the 7th August last the Lords of the Privy Council requested to be furnished with a description of the measures which the Board considered necessary for cleansing, &c. vessels in which cattle are brought to this country; and the Board submitted, in reply, Regulations, copies of which are annexed.

No Orders have, however, been issued by the Council on this subject, nor in respect to the number of cattle to be carried, nor to enforce their being supplied with water or food whilst on board ship.

I am, Sir,
Your most obedient servant,
GEO. DICKINS,
Secretary.

Mountague Bernard, Esq.
&c. &c. &c.

Proposed Regulations for the better Prevention of Disease in Imported Cattle.

No vessel in which cattle have been imported shall clear outwards until every part of such vessel in which cattle have been placed shall be thoroughly cleansed with water, and subsequently by the application of disinfectants to the satisfaction of a sanitary officer to be appointed by the Privy Council.

Cattle brought in any vessel in which either the accommodation or the ventilation is pronounced by such sanitary officer to be imperfect will be liable to detention, at the risk and expense of the importers, until the state of the cattle is such as to enable the veterinary surgeons to make a satisfactory examination.

All wharves or places on which cattle may be landed, as well as the stages or other means used in landing them, shall in every case be cleansed, and disinfectants applied, before they are again used.

Memorandum explanatory of the grounds on which the Regulations are recommended.

The officers of Customs having charge of vessels do not possess the knowledge requisite for ascertaining that the sanitary regulations proposed have been effectually carried out, and therefore it is indispensable to their success that a medical officer should be appointed to inspect the vessels on arrival, and again after cleansing; and that only upon his certificate should the vessels be allowed to leave the port.

Considerable opposition may be expected to these Regulations, because they will cause delay in the departure of the vessels, or necessitate the employment of extra vessels.

It would therefore be very desirable, in order to facilitate the adoption of any Regulations which the Lords of the Council may see fit to direct, that such directions should be communicated by their Lordships to the proprietors and owners of shipping employed in this trade.

Cattle Plague Commission,
House of Commons (Principal Floor, Room 10),
Westminster, S.W.
13th December 1865.

SIR,

WITH reference to the subject of my letter to Sir Thomas Fremantle of the 27th ultimo, I am to request that the Commissioners of Customs will be pleased to furnish me, for the information of this Commission, with copies of the following papers:

(1.) No. $\frac{113}{1856}$ (Instructions in respect to the delivery of cattle) with a paper marked A. and an annexed form.

(2.) No. $\frac{36}{1857}$

I am, Sir,
Your obedient Servant,
MOUNTAGUE BERNARD.

F. G. Gardner, Esq.,
&c. &c.
Custom House, E.C.

Custom House,
15th December 1865.

SIR,

I AM directed by the Commissioners of Her Majesty's Customs to transmit, in compliance with the request contained in your letter of the 13th instant, the enclosed

copies of two General Orders issued by the Board to their officers on the subject of the Cattle Plague; viz.:

No. $\frac{113}{1856}$ with its inclosures.

No. $\frac{36}{1857}$

I am, Sir,
Your most obedient Servant,
GEO. DICKINS,
Assistant Secretary.

Mountague Bernard, Esq.,
&c. &c.

Enclosure 1. in preceding letter.

No. $\frac{113}{1856}$

By the Commissioners for managing and causing to be levied and collected Her Majesty's Customs.

6th September 1856.

The Board having, with reference to the General Order, No. $\frac{74}{1856}$, transmitting copy of an Order in Council dated the 28th July last, making further provision respecting the importation of diseased cattle, sheep, &c., approved of instructions for the guidance of the officers, on the arrival of foreign cattle in this country;

Ordered, that copies thereof be delivered to the proper officers in London, and transmitted to the collectors and comptrollers at the several out-ports for their government.

Custom House, London,
24th December 1856.

THE aforegoing copy of the Board's Minute of the 6th September last, is, together with a copy of the instructions therein referred to, transmitted to the collector and comptroller at

By order of the Commissioners,
F. G. GARDNER.

Instructions in respect to the Delivery of Cattle.

The Commissioners of Customs deem it necessary, for the guidance of their officers in all cases to which their General Order $\frac{74}{1856}$ applies, but with special reference to a contagious disease, called "Murrain," which has recently broken out amongst the horned cattle at Mecklenburg, to issue the following general instructions, together with the accompanying statement of the symptoms of the particular disease in question.*

1st. On the arrival of a vessel with cattle, sheep, lambs, or pigs, the attendance of the veterinary surgeon is to be obtained as soon as possible.

2nd. After the cattle, sheep, lambs, or pigs have been landed, they are to be kept in charge until each animal has undergone a careful examination, and if found free from disease the whole are to be passed immediately; but in the event of any disease being found to exist, such of them as may be so diseased are to be immediately killed, if the same be considered necessary by the veterinary surgeon; and if upon a post-mortem examination of such cattle, sheep, lambs, or pigs, the same be found fit for human consumption, they, and the rest of the importation, are to be delivered to the owner or owners thereof; but should any of those so examined be unfit for such purpose, and the disease be of an epidemic or contagious character, they are to be buried, or effectually destroyed, in the presence of an officer, and the remainder of the importation detained for further examination so long as the veterinary surgeon may deem necessary, and dealt with as before directed. The expenses incurred in detaining the whole or any part of the importation, or in killing and destroying those unfit for human food, to be defrayed by the owner or owners.

3rd. Sheep and lambs are not to be examined after dark, daylight being absolutely necessary for the detection of certain diseases.

Lastly. The veterinary surgeon is to be required to keep a record of the particulars of each transaction agreeably to the annexed form.

Port of

Name of vessel.	From whence.	No. of cattle landed.	Date and hour landed.	Date and hour of examination.	Date and hour passed out of charge.	No. of cattle detained.	Date and hour when		Sex of beast slaughtered.	Nature and extent of disease in each beast slaughtered.	How disposed of when slaughtered.	Name of examining surgeon.
							Detained.	Released.				

Enclosure 2.

No. $\frac{36}{1857}$

Office of Committee of Privy Council for Trade,
Whitehall, 3rd April 1857.

SIR,

IN connexion with the examination of cattle offered for permission to be landed at the various ports of the United Kingdom, I am directed by the Lords of the Committee of Privy Council for Trade to acquaint you for the information of the Commissioners of Her Majesty's Customs, that it has been indirectly communicated to their Lordships that in the event of any cattle shipped for this country, dying or manifesting symptoms of disease on the passage, it has been a practice of the officer in charge of the vessel to cause them to be thrown overboard, thus destroying the evidence on which the remainder of the cargo might be subjected to precautionary detention.

My Lords would suggest that, with a view to counteracting this device, the officers at the several ports should be instructed to compare the number of cattle proposed to be landed with that which appears in the ship's manifest and other papers, and that the inability to account for those deficient should subject the rest to all the measures incident to well-grounded suspicion.

My Lords would further call the attention of the Commissioners, that in the cases of intestinal disorders, accompanied by infection, the danger of contagion is believed to attach to the droppings and manure of the animals affected, and consequently that vigilant attention should be paid to the condition of the decks, in any vessel from which suspected cattle have been landed, and that their thorough purgation, so far as the Commissioners of Customs have any power to require it, should be strongly impressed on the persons in charge of such ships.

I am, Sir,
Your obedient Servant,
J. EMERSON TENNENT.

The Secretary of
Customs.

Custom House, London,
8th April, 1857.

THE aforegoing copy of a letter from Sir James Emerson Tennent, Joint Secretary to the Lords of the Committee of Privy Council for Trade, is transmitted to the collector and comptroller at
for their information and guidance.

By order of the Commissioners,
F. G. GARDNER.

Cattle Plague Commission,
House of Commons (Principal Floor, Room 10)
Westminster, S.W.
15th December 1865

SIR,

ON the part of this Commission I have to acknowledge, with thanks, the receipt of your letter of this date with its enclosures.

* This statement is omitted as superfluous.

I have further to request that the Commissioners of Customs will have the goodness to state, for the information of this Commission:

1. Whether the two General Orders specified in your letter are now in force?
2. Whether the Veterinary Inspectors keep such tabular records as are directed by the order No. $\frac{113}{1856}$; and, if so, whether such records are transmitted by them to the Board of Customs, or what becomes of them?
3. Whether, if the number of cattle proposed to be landed from any ship does not agree with the number in the ship's manifest, and no account of the deficiency is given, any special measures are adopted, or have been ordered, as "incident to well-grounded suspicion"?

The Commissioners of Customs will doubtless see sufficient reason for these inquiries in the great importance which this subject has assumed, and which it appears likely to possess hereafter.

I am, Sir,
Your obedient Servant,
MOUNTAGUE BERNARD.

Geo. Dickins, Esq.,
Assistant Secretary,
Board of Customs.

Custom House,
Sir, 17th January 1866.

Having laid before the Commissioners of Her Majesty's Customs your letter of the 15th ultimo, requesting to be furnished with certain information on behalf of the Cattle Plague Commissioners,—

I am directed to acquaint you, in reply to your first inquiry relative to the General Orders of this Board No. $\frac{113}{1856}$ and No. $\frac{36}{1857}$, that both of these Orders are still in force.

In reply to the second inquiry, as to the tabular records being kept by veterinary surgeons employed by this department, I am desired to state that, from the inquiries made by the Board, it appears that the veterinary surgeons have kept the records directed by General Order No. $\frac{113}{1856}$, except at one port, where the Board have now directed it to be kept; but that such records are not transmitted to the Board, but are retained at the respective ports.

And as to the third inquiry, relative to the special measures adopted when the number of cattle landed from any ship does not agree with the number on the ship's manifest, I am desired by the Board to acquaint you, that having made inquiry what steps are taken by the officers at the outports in order to give effect to the suggestion of the Lords of the Committee of Privy Council for Trade in their letter dated the 3rd of April 1857, the Board are informed that in all cases wherein a difference has been found between the number of cattle reported and that landed from any vessel, a satisfactory explanation has been required from the master before the report has been allowed to be amended; but the Board are informed that instances of discrepancies of this kind have been infrequent. The Board have, however, again called the special attention of their officers to the suggestions contained in Sir J. Emerson Tennent's letter of the 3rd April 1857, in a further General Order, dated the 15th instant $\left(\frac{2}{1866}\right)$, a copy of which I am directed to forward herewith, for the information of the Cattle Plague Commissioners.

I am, sir,
Your most obedient servant,
GEO. DICKINS,
Assistant Secretary.

Mountague Bernard, Esq.
&c. &c.

Enclosure in preceding Letter.

No. $\frac{2}{1866}$.

Minute of the Board of Customs, dated 10th January 1866.

The Board deem it necessary to call the special attention of their officers to the letter of Sir J. Emerson Tennent, dated 3rd April 1857, transmitted in General Order, No. $\frac{36}{1857}$, by which "the officers at the several outports "are instructed to compare the number of cattle landed "with that which appears in the ship's manifest and other "papers, and that the inability to account for those defi- "cient should subject the rest to all the measures incident "to well-grounded suspicion;" and, as it would appear from the inquiries which the Board have made, that although, in all cases where a deficiency has been found between the number of cattle reported and that landed from the vessel, the master has been called upon for satisfactory explanation as to the cause of the difference, yet, in consequence of cattle being frequently allowed to be landed and delivered before the officers who examine the cattle have received the master's report, the officers and veterinary surgeon have not the means of giving full effect to the suggestions contained in Sir J. Emerson Tennent's letter herein before referred to, the Board desire that the following regulations be observed in all cases in which importers are desirous of landing cattle before the master's report has been received by the examining officer, viz.:—

That the masters of all vessels bringing cattle be required to produce to the officers of this department, immediately on arrival, a cattle manifest (agreeably to the form annexed to this minute), in addition to the ship's usual report, such manifest to contain full particulars as to the number and denomination of the cargo, a note being made thereon of the number and description of any cattle that may have died on board, or that have been thrown overboard; the cause of death, whether from disease or otherwise, being also stated.

The Board also direct that their sanction be obtained for the amendment of ships' reports in all cases of deficiencies in the number of cattle landed; and in the event of the officers having reason to believe that the cleansing of the decks of cattle ships, as recommended in the Council Order of the 3rd April 1857, has in any case been omitted, the circumstance is to be reported for the Board's information and directions.

And copies of this minute, with copies of the form of manifest therein referred to, are to be delivered to the proper officers in London, and transmitted to the collectors at the outports, for their government.

Custom House, London,
15th January 1866.

The aforegoing copy of the Board's minute of the 10th instant is, with copy of the form of manifest therein referred to, transmitted to the collector at
for his government.

By order of the Commissioners,
J. B. Hale.

II. CORRESPONDENCE WITH OWNERS OF STEAM SHIPS EMPLOYED IN THE CATTLE TRADE.

[A similar letter to the following was addressed to each of the shipping owners whose names are given below.]

Cattle Plague Commission,
House of Commons (Principal Floor, Room 10),
Westminster, S.W.

GENTLEMEN, 1st December. 1865.

I SEND you herewith a copy of a letter,* which on the part of this Commission I have addressed to the Chairman of the Board of Customs.

You will oblige the Commissioners by furnishing them with any information which, as owners of vessels employed in the cattle trade, you may be able to afford, with reference especially to the subject of Question 4 (local facilities for inspection and for the temporary detention of cattle), and of Question 5 (the transport of cattle by sea).

The Commissioners will thank you for particular information as to the precautions which you adopt for securing proper accommodation for cattle on board your ships, and for the prevention of disease, and as to the degree of success which is attained by such precautions.

I am, Gentlemen,
Your obedient Servant
MOUNTAGUE BERNARD.

Messrs. Phillipps, Graves, Phillipps & Co.,
St. Dunstan's Hill, E.C.
Mr. George Russell,
1 & 2 Fenchurch Street, E.C.
The Great Eastern Railway Company,
Bishopsgate, E.C.
Mr. A. G. Robinson,
St. Petersburg Steam Ship Office,
20 Mark Lane, E.C.
The General Steam Navigation Company,
21 Lombard Street, E.C.

St. Dunstan's House, London, E.C.
SIR, 8th December, 1865.

IN reply to your letter of the 1st inst., requesting us to furnish you with some particulars respecting the Foreign

* See Correspondence with Board of Customs, letter of the 27th November, p. 40.

Cattle Trade, and enclosing copy of a letter to the Chairman of the Board of Customs, we beg leave to observe with regard to Question No. 4, that our experience of this trade is confined to this port, and that at none of the wharves here do we consider the accommodation sufficient for the feeding and watering of cattle detained after nightfall for inspection by the doctor; at some of them the public street is the only available place for the cattle. For the last two years cattle arriving by our steamers have been landed at Thames Haven, (near the mouth of the Thames, in Essex) where facilities exist for turning the beasts into fields adjoining the wharf, in case of need, and also for watering and feeding, while waiting for inspection. From this place cattle are conveyed by rail to the Cattle Market or adjacent lairs, as may be required, in about two hours, thus avoiding all driving through the streets.

As regards Question No. 5, the cleansing of vessels is carefully attended to after the discharge of the cattle, but we are not aware of any regulations existing by authority on this point. Supervision of this is no doubt exercised at the loading ports abroad, where it is most necessary. Every possible accommodation is afforded on board our steamers, the space being calculated according to the season and the size of the beasts, and wooden fences being fixed at certain distances to prevent them crowding too much in one part, or being thrown together in bad weather, while ventilators are freely introduced below from the decks. Men are specially appointed to feed and water them during the voyage, and to keep them clean and in their places. As regards the success of the efforts made to conduct this traffic properly, we believe the cattle importers will testify that it is attained to such a degree that the dangers of the voyage are reduced to the minimum point.

In respect of the other points raised, we beg to remark that at all the foreign ports with which we trade, viz., Rotterdam, Bremen, Gothenburg, Malmö, Aalborg, Aarhuus and Copenhagen, every means are taken, by the appointment of properly qualified doctors, in each instance (we believe) under the direction of the respective Governments, to prevent the shipment of diseased cattle, and with each cargo is sent a properly certified bill of health. The result of this has been that instances of disease on arrival here have been with us very rare indeed. In one instance, a cargo of sheep and oxen from Sweden were detained at Thames Haven (in the fields) under suspicion of disease for some days, but were ultimately released as sound. This shows clearly the necessity of having proper accommodation at the landing places for such purposes, and such accommodation is probably to be obtained only at some distance from London.

We have the honour to remain, Sir,
Your most obedient Servants,
PHILLIPPS, GRAVES, PHILLIPPS & Co.

The Secretary of the Cattle Plague Commission,
House of Commons, Room No. 10,
S.W.

London, 1 & 2 Fenchurch Street,
SIR, 9th December 1865.

I AM duly in receipt of your communication of the 1st instant, with the accompanying copy of letter addressed by you to the Chairman of the Board of Customs, and have now the pleasure of submitting the following remarks for consideration of the Royal Commission.

As to Question No. 4.

At the ports to which steamers under my management deliver cattle, viz., London,* Lowestoft, and Southampton, there is very excellent provision for cattle being housed, fed, and watered, so as they can be kept without injury till such time as they are inspected and passed by the Veterinary Inspector.

As to Question No. 5.

No compulsory regulations are in force as to cleansing and disinfecting cattle vessels after the delivery of each cargo, neither are there any regulations preventing overcrowding, but all that can be done is voluntarily and most carefully done by myself and other owners to ensure thorough efficiency in the careful, healthful, and humane mode of conveyance; cattle being fed and watered on the voyage, and barriers being securely placed so that the cattle stand in pens of 3 to 10 each, thus effectually preventing overcrowding; perfect ventilation is secured, and after each successive voyage the vessels are cleared of all manure, &c., purified, and then disinfected by a free and careful application of chloride of lime.

The precaution is always taken, at ports where my boats trade to regularly, to have cattle inspected on shipment and a certificate of health sent with each cargo—*any cattle presented for shipment in an unsound condition being rejected*—and cattle attendants, four to each vessel, specially appointed to feed, water, and tend them.

The result of which precautions is, that cattle imported from Tonning (the principal port with which my trade is connected) are invariably sound and in excellent condition; during the course of the last seven years no single case of disease having been brought to my knowledge, and no cattle ordered to be slaughtered except from injuries received on board in stormy weather.

I may add that my remarks apply to paddle steamers specially built for cattle carrying, and thoroughly ventilated, such as the "Tonning" and "City of Norwich," employed in bringing cattle from Tonning to Blackwall, which I particularly mention, as they have both been examined by Dr. Thudichum, of the Medical Department of the Privy Council.

In my opinion, slaughtering or quarantine at the place of landing of cattle would be almost equivalent to stopping importation.

Any further information I shall be glad to afford either personally or by letter.

I am, Sir,
Your obedient servant,
GEO. RUSSELL.

To the Secretary,
Cattle-Plague Commission,
Westminster.

The Great Eastern Railway Company,
Secretary's Office, Bishopsgate Station,
London, N.E.

SIR, 14th December 1865.

IN reply to your letter of the 1st instant, requesting me to furnish your Commissioners with any information which the directors of my company, as owners of vessels employed in the cattle trade, may be able to afford, with reference especially to the subject of Question 5 (the import of cattle by sea), and of Question 4 (local facilities for inspection, and the temporary detention of cattle) as contained in a printed letter from you to the Board of Customs; also for particular information as to the precautions which my directors adopt for securing proper accommodation for cattle on board their ships, and for the prevention of disease, and as to the degree of success which is obtained by such precautions;

I beg to enclose copy of Regulations drawn up by Mr. Wood, the Collector of Her Majesty's Customs at Harwich, sometime ago for our guidance, which Regulations have been duly carried out; also a copy of some Regulations which were also drawn up and issued by that gentleman for the guidance of his own officers, now kindly furnished at my request; which taken together will, I hope, fully afford the desired information. I can only add, that there have been but two cases of Cattle Plague imported here, when the animals affected (which were in the earliest stage of the disease) were immediately slaughtered and buried.

As the port of Harwich is now (next to London) the first port in the kingdom for the importation of foreign cattle, my directors are exceedingly anxious that all their arrangements should be as complete as possible, and they will gladly receive and carry out any suggestions which may be made to them to that end.

I am, Sir,
Your obedient servant,
J. B. OWEN,
Secretary.

To the Secretary of the
Cattle Plague Commissioners,
House of Commons, S.W.

Enclosure 1. in preceding letter.

Accommodation for Foreign Cattle at Harwich, and Regulations observed on their Importation.

Accommodation.

The vessels are constructed and fitted specially for the conveyance of cattle as well as other cargo.

There are dry, well-drained, and ventilated lairs, supplied with water, and the cattle pens, besides being well-drained and spacious, are supplied with water troughs.

There are sheds on the Company's premises for the temporary housing of suspected cattle, approachable without passing over any public road or thoroughfare.

There is a convenient and well-drained slaughter-house at hand, but clear of the other premises, and a burial ground for condemned cattle or meat on railway ground seven miles distant, where the Company have also agreed to deposit and retain all the manure from the ships and lairs.

Regulations observed on arrival of a Cargo.

There is a Cattle Inspector attached to the Customs' staff, who is a member of the College of Veterinary Surgeons, and attends the arrival of every cargo.

* At Brunswick Pier, Blackwall.

Should a cargo arrive before evening, the animals are examined and passed at once, when they are either taken to the lairs and provided with hay and water, or to the pens (which are also provided with water) preparatory to being trucked and sent away.

If arriving too late for a careful examination, before dark, they are housed in the lairs till the following morning, provided with hay and water as before stated, and after being examined by the Veterinary Surgeon at daylight and passed, are trucked and sent to their destination.

Animals bruised or seriously hurt, are at once slaughtered in the Company's slaughter-house, and together with any found dead, are, after inspection by the Veterinary Surgeon, if certified as fit for human food, delivered; if otherwise, both carcases and hides are destroyed by being saturated with carbolic acid in the presence of a Customs' Officer, and, if decomposed, sent in charge of such officer to the burial ground before mentioned and interred six feet deep, as would be the case with any showing symptoms of a contagious or infectious disorder, but none such have as yet arrived.

Should any live cattle arrive with suspicious symptoms, but not sufficiently defined as to warrant the use of the knife, they would be removed to the building set apart for such a contingency, and subsequently be delivered, or slaughtered and buried, as the event might justify; but should a single animal affected with the plague arrive, it would be destroyed and buried, and all those imported in the same ship be detained and kept apart for so ong a period as the Customs' authorities might deem necessary or expedient.

On discharge of a cargo the steamers, from the deck to the lower hold, are scraped, flushed by means of a steam-hose, and lime-washed, when they are inspected by a Customs' officer on being officially cleared for another voyage.

The trucks conveying cattle arriving from the Continent are kept separate from all others, and cleansed and lime-washed after every journey.

The lairs are regularly lime-washed, and the litter removed, when they are thoroughly cleansed, and fresh litter laid down.

Finally, the whole are supervised by the Officers the Customs, and their Cattle Inspector.

J. W. Wood,
Collector.

(Agreed) J. G. Powers,
Continental Traffic Manager.*

Custom House, Harwich,
August 26, 1865.

Enclosure 2.

Port of Harwich.

Regulations to be observed by Mr. Stevenson, Examining Officer, respecting Foreign Cattle, from their importation to their delivery, during the prevalence of the Cattle Plague.

1. On arrival of a cargo, that the animals be duly tallied out, and it be seen that they are taken to the place assigned for their examination by the Veterinary Inspector, also that none be permitted to be sent away until such officer has examined them, and certified that they are free from disease.

2. A report to be made to the Collector every morning respecting the condition of the animals arriving, and the number and description of such as may have died or been slaughtered during the voyage (if any), when special instructions will be issued as to their disposal, with reference to the provisions of the Order in Council of the 17th November 1863, of which the examining officer has a copy.

3. That in the event of the veterinary inspector discovering a case of Cattle Plague or any other contagious or infectious disorder, with reference to the Order in Council of July 1856, and the Board's orders thereupon, which the examining officer has read from time to time as they have been received, the fact be immediately reported to the collector, who will issue such directions as he may consider necessary, till the pleasure of the Board can be ascertained.

4. That all animals condemned by the Veterinary Inspector as unfit for human food, must (unless decomposed) be opened by the railway servants, and liberally watered by its officers by means of a watering-pot having a rose top to to the spout, with diluted carbolic acid in the proportion of a pint of the acid to a gallon of water, when, unless required by the agent for the owner, the carcases may be buried in an approved place or taken out to sea, as follows: (a portion of one of the ears of each being first cut off) either by the steamer which brought them in, or by the company's tug boat, but in all such cases must be thrown overboard at ebb tide, and no nearer the land than the seaward side of the Cork Light Ship; but in cases of Cattle Plague, the carcases must first be opened and freely watered with diluted carbolic acid as before-mentioned, then buried in an approved place, and before being earthed up two bushels of unslacked lime (provided by the company) be thrown over each carcase.

5. That a strict watch be kept over any animals that may be detained, and that none be allowed to be removed without the knowledge and authority of the veterinary inspector and the collector; also, that the place where animals may have been detained be thoroughly cleansed and disinfected by the company, as may be approved by the veterinary inspector, previous to any fresh animals being taken there.

6. That the Veterinary Inspector be allowed the attendance and assistance of any officer or officers he may require, and that any case of doubt or difficulty be immediately referred to the collector.

(Signed) J. W. Wood,
Collector.

Custom House,
3d October 1865.

St. Petersburg Steam Ship Office,
20 Mark Lane, London,
19th December 1865.

Sir,

I beg to acknowledge the receipt of your letter of the 1st instant, asking for information relative to the import of cattle.

In reply I beg to state that at the wharf where we have been in the habit of landing cattle there exist facilities for both the watering and feeding of cattle during the time they may be detained for veterinary examination, or otherwise.

It is the invariable practice of the captains of our steamers to have them thoroughly cleansed after the discharge of the cattle; and in cases where we have vessels exclusively employed in the conveyance of cattle, they are regularly washed throughout on the outward voyage with warm water from the engines (a pump being fitted for the purpose), and the holds from time to time white-washed and disinfected.

Our vessels are constructed specially for the conveyance of cattle, and are most carefully fitted with stalls and pens for the proper separation and prevention of overcrowding of the cattle, consequently the loss has been very trifling indeed. In some trades we import the cattle on our own account; in others, when a loss occurs, we have to make some compensation to the owners.

For a long time we have had the cattle carefully examined by competent veterinary surgeons at the ports of shipment, and have notified the shippers that if any attempt is made by them to ship diseased cattle of any kind we will decline to carry for them in future; the results are most satisfactory, as scarcely an instance has occurred where cattle have been stopped by the veterinary surgeons on this side, and I am not aware of any really diseased cattle being found, with the exception of one case of lung disease from Holland, and one cargo of cattle from Oporto which were suffering more or less from foot and mouth disease.

I am, Sir,
Your obedient servant,
A. G. Robinson.

The Secretary,
Cattle Plague Commissoners,
House of Commons.

General Steam Navigation Company,
Chief Office, 71 Lombard Street, London,
3rd January 1866.

Sir,

I beg to acknowledge the receipt of your letter of the 1st ultimo, requesting information with reference to the transport of cattle by sea, and as to local facilities for inspection, and for the temporary detention of cattle, in connection with the vessels belonging to the General Steam Navigation Company, and employed in the cattle trade, and upon other points relating thereto.

In reply, I am instructed by the Directors to state that the steamers of the company engaged in the conveyance of cattle, sheep, &c., are thoroughly cleansed immediately after the delivery of the animals, the holds and decks being well-washed, and disinfecting fluid (chloride of zinc) liberally applied.

This process is observed after each voyage, and occasionally the holds are limewashed, and other measures adopted in order to secure the utmost possible freedom from effluvia or unwholesome effect from the nature of such cargoes.

* This paper is printed in Appendix B. to the Commissioners' First Report, but for the sake of convenience it is reprinted here.

The holds of the vessels appropriated for the conveyance of cattle are divided or stalled off by stanchions, rails, and boards, and the compartments for sheep are formed of stanchions, rails, and hurdles; by these means, and the ample space allowed for the animals, all overcrowding is entirely prevented.

In most instances the cattle are attended on board the vessel by drovers appointed by the shippers, who provide the necessary food for the cattle, the ship having a plentiful supply of water in tanks for the use of the animals during the voyage.

The cattle, sheep, &c., brought by the Company's steamers are landed either at Brown's Wharf, Blackwall, or St. Katherine's Wharf, East Smithfield, where every convenience is provided for the safe landing and keeping of the cattle at any hour, and for the inspection of the same by the veterinary surgeon.

Water is laid on at both wharves for the supply of the animals in any quantity, and, when necessary, fodder is provided for the cattle by the consignees.

The Directors, after many years' experience, are enabled to say that the result of the arrangements on board the Company's vessels for the prevention of disease or deterioration of the cattle has proved highly satisfactory, the animals being brought from the most distant continental ports, landed, and passed to market generally in most excellent condition, the exceptions arising only on the occasion of the vessels having to encounter boisterous weather and heavy sea during the passage.

I am, Sir,
Your obedient servant,
MARTIN PRATT,
Secretary.

The Secretary,
Royal Cattle Plague Commission.

III.—CORRESPONDENCE WITH CATTLE SALESMEN.

Cattle Plague Commission,
House of Commons (Principal Floor, Room 10),
Westminster, S.W.,
27th November 1865.

SIR,

IN the course of your examination before this Commission you adverted to the mode of inspection at the ports; to the detention of animals, in some cases, for the purpose of inspection; to the want of convenient space for this purpose at some of the wharves; and to the absence of inspection for shipping employed in the transport of cattle, and some evils thereby occasioned. I send you herewith a copy of a letter which I have addressed to the Board of Customs, and I have to request that if there is any information which you think might usefully be brought to the knowledge of the Commissioners upon any of the points mentioned in it, you will have the goodness to send such information to me in writing at your earliest convenience.

The Commissioners will, if desired, receive from you or some other gentlemen engaged in the cattle trade oral information on any of the points above mentioned.

I am, Sir,
Your obedient Servant,
MOUNTAGUE BERNARD.

Mr. H. Gebhardt.

Albion Bank, Limited,
Smithfield Branch, London,
4th December 1865.

GENTLEMEN,

IN reply to a letter received from your Secretary, dated 27th November, I beg to draw the Royal Commissioners' attention to the following remarks:

First.—As regards the transport of cattle. Cattle should only be allowed to be shipped to England in paddle steamers, as it is a proved fact that screw steamers damage and kill a great many more cattle than paddle steamers.

The majority of steamers engaged in the foreign cattle trade are paddle, but a few are screws, and they do more mischief than all the paddle steamers together.

Second.—Each steamer should be inspected as regards space, and only so many animals should be allowed according to the size of the steamer.

There is great opposition in this trade; one company carries them for less freight than another, and to make up for low rates the cattle are packed as close as herrings; the consequences are, dead, damaged, and bruised animals. Every steamer that carries cattle should have plenty of partitions, so that no more than three or four oxen stand in one place; and also that they should have room to lie down. It would be much more profitable to the owners of cattle to pay higher freight, and have their stock delivered in a good condition, than the present cheap freights, and delivered in a bad one.

Third.—The ventilation in some steamers is very bad. I can prove instances where lots of oxen and sheep were smothered in fine weather for want of ventilation and from being overcrowded.

As regards the landing-places for cattle, they are as bad and insufficient as can well be imagined. The wharves answered very well when the trade was small, but as the importation increases every year there is not one wharf at present adapted to the purpose. It is frightful to witness the sufferings the cattle are exposed to during the time that they are obliged to remain there, particularly in the winter season.

As no cattle are allowed to leave the wharves unless inspected, and as this is only done in the daytime, cattle have sometimes to remain at the wharf from five in the afternoon till 9 or 10 o'clock next morning, some standing in the street, others in open places, without the slightest chance of receiving shelter, water, or hay.

Cattle are not allowed to be driven on a Sunday, so that if they arrive too late to be passed on Saturday afternoon (the time when most steamers arrive) they must remain till Sunday night. The landing of cattle lower down the river at Thames Haven, &c. is worse still, and if the cattle have had a rough passage, and in consequence are tired and lame, when they are put in railway trucks they fall one on the other, and arrive in London in so bad a condition that they frequently have to be killed at the railway station.

My experience has shown me that the comparative few cattle which now arrive by rail come in a bad condition, and it would be still worse if all had to come by the same means; or, if insisted upon by Government, great alterations ought to be made.

In my opinion the best place to land cattle is Blackwall, provided proper places were made where cattle after being landed could be brought under cover, and obtain water and hay until they were passed by the doctor.

Blackwall is a convenient place near the market, and a great many beasts and sheep are driven from there to fields and lairs near Tottenham, only touching London on the outskirts, passing through Poplar, by *Victoria Park*, Hackney, and Clapton, avoiding all crowded thoroughfares.

I shall be very happy to wait upon the Royal Commission, if they should wish to examine me more fully, but must request that I may not be called either Monday or Thursday, those being market days.

I am, Gentlemen,
Your most obedient Servant,
H. GEBHARDT.

To the Royal Cattle Plague Commissioners.

Cattle Plague Commission,
House of Commons (Principal Floor, Room 10),
Westminster, S.W.
11th December 1865.

SIR,

I AM desired by Her Majesty's Commissioners for inquiring into the origin, &c. of the Cattle Plague to ask you, as an importer of cattle carrying on a large business, to be good enough to furnish them with information on the following points:—

I. Whether at the Port of London, or at any other ports which as an importer you may be acquainted with, sufficient room and accommodation are provided (1.) for the inspection of imported cattle; (2.) for detaining them until they can be inspected; (3.) for keeping suspected animals in quarantine, when this is deemed advisable?

II. Whether it would in your opinion be advisable, as to vessels employed in the cattle trade, that regulations should be made by authority (1.) to ensure their being cleansed and disinfected after every voyage; (2.) to ensure the cattle being fed and watered on the voyage; (3.) to prevent them from being overcrowded: or whether, as the trade is now conducted, any such regulations are in your opinion unnecessary?

You would further oblige the Commissioners by giving them any information which you may possess on the following points:—

III. What inspection, examination, or quarantine, horned cattle, sent to Hamburg or Rotterdam from Galicia or Hungary (or from Bessarabia or Podolia through Galicia), would have to undergo between the beginning and the end of the journey?

IV. What would be the average time which such attle would take on the journey from Vienna, or from the

Galician frontier to England, and what the quickest time within which the journey could practically be done?

I am, Sir,
Your obedient Servant,
MOUNTAGUE BERNARD.

Mr. Pool,
Cattle salesman,
17, West Smithfield.

14, Mount Place, Whitechapel Road,
Dec. 20, 1865.

SIR,

In answer to yours of 11th instant I have much pleasure in forwarding following answers :—

I. (1.) Not sufficient standing room at any wharf in the Port of London for the large quantity of cattle at present imported.
(2.) Decidedly not. The wharves being so deficient of space, the Inspectors are compelled to inspect the cattle outside of them, namely, in the open streets.
(3.) Not sufficient accommodation for keeping a large quantity of cattle in quarantine.

II. (1.) In my opinion such authority would be extremely advisable for the health of the cattle.
(2.) If such could be practically accomplished would be a great benefit for the welfare of the cattle.
(3.) I consider the vessels generally very much overcrowded, and regulations for space much needed.

III. The cattle are inspected in Hamburg and Rotterdam, previous to their being shipped for exportation, by members of the Royal Veterinary College, especially appointed for that purpose, and any cattle infected or suspected with the foot and mouth or any other disease are prohibited from being shipped.
As regards the other places mentioned in your question I am not acquainted with the mode of examination or quarantine.

IV. Cannot state.

I am not acquainted with the landing places for cattle at Thames Haven or Harwich, but Southampton I consider the best and most commodious.

At Newhaven there is no accommodation whatever.

I must call your attention that at times too many horned cattle are placed in one pen on board the steamers; and further, that the manner in which small cattle are placed on the bridges and also on deck, one tier above the other, tends to impoverish them, and should be prohibited; and further must beg to state that cattle at times are kept too long on the railways in transit.

Any further information required will be readily given by

Your very obedient Servant,
EDWARD MAGNUS,
per pro
MARCUS POOL.

Mountague Bernard, Esq.

APPENDIX C.

CONVEYANCE OF CATTLE BY RAILWAY.

CORRESPONDENCE with various RAILWAY COMPANIES on (1) the cleansing of Trucks and Pens; (2) the course adopted with reference to Cattle appearing to be diseased; (3) the covering of Cattle Trucks; and (4) the facilities afforded for the watering and feeding of Cattle.

THE circular printed below was forwarded to the following Railway Companies. The answers received are presented in a tabular form in pp. 48–55; and the regulations of which copies have been received will be found in pp. 56–63:—

Caledonian.
Glasgow and South-western.
Great Eastern.
Great Northern.
Great Southern and Western (of Ireland).
Great Western.
Lancashire and Yorkshire.
London and Blackwall.
London, Brighton, and South Coast.
London, Chatham, and Dover.
London and North-western.
London and South-western.
Manchester, Sheffield, and Lincolnshire.
Midland.
Midland Great Western (of Ireland).
North British.
North-eastern.
North Staffordshire.
Scottish North-eastern.
South Devon.
South-eastern.

Cattle Plague Commission,
House of Commons (Principal Floor, Room 10),
Westminster, S.W.
11th December 1865.

SIR,

I AM directed by Her Majesty's Commissioners for inquiring into the Origin, &c. of the Cattle Plague, to request that the Directors of the
Railway will have the goodness to cause answers to the subjoined questions to be sent to me, for the information of the Commissioners, as soon as conveniently may be.

Railways, along which large quantities of cattle are being continually conveyed, in close contact with one another, and in trucks which are in constant use, may, in the absence of due care and precaution, assist in the dissemination of disease. The Directors of the
Railway are doubtless perfectly sensible of this; and the Commissioners feel assured that they will willingly furnish all such information on this head as it is in their power to afford.

I am, Sir,
Your obedient servant,
MOUNTAGUE BERNARD,
Secretary.

The Chairman of the Board of Directors
of the
Railway Company.

1. Are the cattle trucks on the Railway cleansed after every journey?

2. How are they cleansed? Is any and what disinfectant employed in cleansing them?

3. Who is responsible for their being properly cleansed?

4. Are the pens or yards belonging to the company, into which cattle are driven before being put into the trucks or after being discharged from them, cleansed, and how often, and who is responsible for this?

5. Are any general directions or regulations issued to the officers or servants of the company on the above heads?

6. Are any general directions issued to the company's officers or servants respecting cattle, in the company's trucks or pens, appearing to be diseased?

7. If so, in how many instances have these directions been acted on since the 1st of June last?

8. Are any, (and, if so, what proportion) of the trucks in which cattle are conveyed covered, wholly or partially, at the top or sides? Would there be any difficulty in providing covered trucks, or any objection to it?

9. Are there any general directions or regulations respecting watering or feeding of cattle during a journey, or for enabling them to be watered or fed, if desired by the owner or his agent?

10. If such facilities for feeding or watering are given, are they often used; or is the inconvenience of unloading trucks of the ordinary construction and loading them again found to be an obstacle to this?

11. Are trucks which enable cattle to be watered and fed without being removed on the journey in use on your railway? Have the directors considered the expediency of adopting them, and do they see any objection to it?

12. Please to furnish a copy of any general directions or regulations which may be in force on the company's railway on any of the above heads, or respecting cattle traffic in general, specifying which, if any, of them are temporary, and which of them have been issued since the 1st of June last.

Copies of the Documents referred to

Name of Railway Company.	1. Are the cattle trucks on the Company's railway cleansed after every journey?	2. How are they cleansed? Is any and what disinfectant employed in cleansing them?	3. Who is responsible for their being properly cleansed?	4. Are the pens or yards belonging to the Company, into which cattle are driven before being put into the trucks or after being discharged from them, cleansed, and how often, and who is responsible for this?	5. Are any general directions or regulations issued to the officers or servants of the Company on the above heads?	6. Are any general directions issued to the Company's officers or servants respecting cattle, in the Company's trucks or pens, appearing to be diseased?	7. If so, is the manner in which these directions have been acted on since the 1st of June last?
Caledonian -	They are -	They are swept out, and thoroughly washed with water. They are disinfected with chloride of lime and quicklime.	The station agents, under the cattle traffic superintendent.	The pens are all painted with coal tar, and the yards are regularly cleansed and all refuse taken away, and the station agents [are responsible.	There are general directions issued to the station agents, viz., "You will cause all cattle waggons at your station to be properly cleansed out and thoroughly washed with water before being used. Dung and other refuse must be regularly taken away from the pens, and fresh gravel used where the pens are not paved."	There are general directions issued for cattle appearing to be diseased, viz. [Here follows the description of the symptoms of the disease given in the Order of Council of the 11th August, 1865.]	They have been acted on since the 20th June last, and we have carried no disease cattle to our knowledge.
Glasgow and South-western.	Yes - -	Water and chloride of lime.	The various agents placed at the different stations of the Company.	It will be seen by the enclosed orders to the agents, that all these are dealt with the same as cattle waggons, and the agents are responsible for seeing this done.	Yes; orders 36, dated 10th August, and 40, dated 23rd August 1865.	Yes; see above -	Always when necessary. cannot exceed on the number times.
Great Eastern.*	Yes - -	By means of brooms and lime mixed with water.	The station master in each case.	The pens are cleansed in the same manner as the trucks after each lot of cattle has been removed from them.	Yes - - -	The instructions on this head are merely "copy" of the Orders in Council. A printed copy is attached.	Not any case
Great Northern.	Yes - -	Always swept and frequently washed. Chloride of lime is most generally used, but in some cases McDougall's powder.	The station masters, and at large stations the outdoor inspector.	Yes; they are kept constantly cleansed.	Yes. Copies of instructions attached.	Yes. See the accompanying directions.	I cannot say that any diseased cattle have been received at our stations.
Great Southern and Western (of Ireland).	Yes - -	By brushing and sweeping. No disinfectant used; but this would be immediately attended to on the first appearance of disease.	Station masters -	As often as required, under supervision of station masters.	See annexed copy of order issued.	No instance of cattle disease has yet come under the Directors' notice.	See No. 6 -

* The following letter was forwarded with the answers:—

Sir,

I beg leave to state that the answers given in the enclosed document apply only to our Inland Cattle Traffic.

these Answers will be found in pp. 56-63.

8. Are any (and, if so, what proportion) of the trucks in which cattle are conveyed covered, wholly or partially, at the top or sides? Would there be any difficulty in providing covered trucks, or any objection to it?	9. Are there any general directions or regulations respecting watering or feeding of cattle during a journey, or for enabling them to be watered or fed, if desired by the owner or his agent?	10. If such facilities for feeding or watering are given, are they often used; or is the inconvenience of unloading trucks of the ordinary construction and loading them again found to be an obstacle to this?	11. Are trucks which enable cattle to be watered and fed without being removed on the journey in use on your railway? Have the Directors considered the expediency of adopting them, and do they see any objection to it?	12. Please to furnish a copy of any general directions or regulations which may be in force on the Company's railway on any of the above heads, or respecting cattle traffic in general, specifying which, if any, of them are temporary, and which of them have been issued since the 1st of June last.	Name of Railway Company.
About two-thirds of the cattle waggons are covered at the top.	If the owner or his agent desires the cattle to be watered or fed, it can be done at the principal terminal stations on the Caledonian line.	They are not often used, the loading and unloading being considered an obstacle.	There are no trucks which enable cattle to be watered and fed on journey in use on the Caledonian Railway. The Directors have considered the expediency, but have found the present trucks could not be so fitted up. Trucks would require to be specially constructed for such a use.	The general regulations of the Caledonian Railway Company are, that the dealers in cattle have their cattle loaded to their wish, and that for every one waggon to three waggons one drover is carried free by the same train as the cattle to attend to them on the journey. There are no other general regulations but those referred to in clauses 5 and 6, which have been in use since August last.	Caledonian.
We have in all 240 waggons, and there are about 100 of them covered. Some dealers dislike and will not use covered waggons. My own opinion is that cattle travel more comfortably without covering.	None; the distances on this line over which cattle travel are so short, that this has not been considered necessary, and has never been asked.	See above. Our trucks are of the ordinary construction, similar to what are used in England on leading lines.	These are not in use, and no demand for them. To water cattle on the way would cause great delay.	See answer to Article 5 - -	Glasgow and South-western.
Rather more than one-half of our cattle trucks are covered at the top, only partially so at the sides. There is no objection whatever to covered trucks; they are an advantage, and we substitute them for "open" ones when new vehicles are ordered by the Company.	The longest distance that cattle travel on this railway is 120 miles, and these are generally in charge of drovers who look after the beasts on the road. For our London cattle we provide at Tottenham and Stratford, which are the two stations where the London cattle are landed, water-troughs, always kept filled with water when cattle are expected. At Tottenham we possess also lairs, where the cattle are housed, fed, and watered, if the consignees request it.	Facilities are not given by the Company for feeding during transit. The drovers in charge look after the beasts. The time occupied in unloading and loading up again would be a barrier to the cattle being fed at the Company's stations on the road.	No. The Directors have not considered the expediency of them on account of no cattle being conveyed over this line a distance of more than 120 miles.	Attached are copies of all the instructions which have been issued. They have all been issued since the 1st June last.	Great Eastern.
All the Great Northern cattle waggons are covered.	No. The owners or their drovers have a free pass to travel with their cattle for the purpose of attending to them on the journey.	The only facilities are contingent on the cattle being unloaded and reloaded after watering; which in practice is found to be impossible.	No practical method has yet been found for watering cattle in the trucks when in full truck loads.	Copies attached - - -	Great Northern.
The greater portion of trucks used are covered at top and sides.	None. No application of this nature has ever been made to the Company.			See Rule No. 5 - - -	Great Southern and Western (of Ireland).

I have intentionally limited them to that description of traffic, because the nature of the questions has led me to think they do not apply to the Foreign Cattle Trade.

I am, &c.
R. Moseley, per Wm. Bent.

Copies of the Documents referred to

Name of Railway Company.	1. Are the cattle trucks on the Company's railway cleansed after every journey?	2. How are they cleansed? Is any and what disinfectant employed in cleansing them?	3. Who is responsible for their being properly cleansed?	4. Are the pens or yards belonging to the Company, into which cattle are driven before being put into the trucks or after being discharged from them, cleansed, and how often, and who is responsible for this?	5. Are any general directions or regulations issued to the officers or servants of the Company on the above heads?	6. Are any general directions issued to the Company's officers or servants respecting cattle in the Company's trucks or pens, appearing to be diseased?	7. If so, to how many instances have these directions been acted on since the 1st of June last?	8. Are any (and, if so, what proportion) of the trucks in which cattle are conveyed covered, wholly or partially, at the top or sides? Would there be any difficulty in providing covered trucks, or any objection to it?	9. Are there any general directions or regulations respecting watering or feeding of cattle during a journey, or for enabling them to be watered or fed, if desired by the owner or his agent?	10. If such facilities for feeding or watering are given, are they often used; or is the inconvenience of unloading trucks of the ordinary construction and loading them again found to be an obstacle to this?	11. Are trucks which enable cattle to be watered and fed without being removed on the journey in use on your railway? Have the Directors considered the expediency of adopting them, and do they see any objection to it?	12. Please to furnish a copy of any general directions or regulations which may be in force on the Company's railway on any of the above heads, or respecting cattle traffic in general, specifying which, if any, of them are temporary, and which of them have been issued since the 1st of June last?	Name of Railway Company.
Great Western.*	Yes, at the inwards station, except in special cases when there is not time to do so before re-turning them, when it is done before the truck is again loaded.	They are scraped and brushed, and on arriving washed with water; but it is now the rule that they are frequently to be placed under the hose and occasionally strewed with chloride of lime.	1. The station master of each station, and the staff under him. 2. The District Superintendent and District Goods Manager are responsible to see that the regulations are carried out. 3. There are two travelling cattle traffic inspectors, whose duty is to report to the Superintendent and Goods Manager any case in which the trucks are not properly cleansed.	Yes, same as No. 3.	Yes; copy sent herewith.	See No. 5 - -	If by this question is meant, In how many cases have diseased animals been found on the Company's premises? although the Company have employed veterinary surgeons occasionally, when there have been cattle coming from fairs, in no case has any animal infected with the rinderpest been discovered; but in one instance sheep infected with the small-pox, or other sheep disease, were refused and destroyed.†	Nearly one-half are covered. None whatever. We build all new trucks "covered," and are now building 150.	None. Experiments have been tried by putting pails of water in the trucks, but in no case have the cattle drunk. Indeed, the best information we have is that they will not do so (probably from nervous excitement) until they have been loaded for two or three hours. The Directors are not only willing but anxious to fall in with any *practicable* scheme which will prevent any suffering and keep up the condition of cattle in transit.	Copies of some of the orders are sent herewith. No. 1 is permanent. No. 2 was issued prior to the recommendation of the Royal Commission, is now in force, but was intended to be temporary.	Great Western.
Lancashire & Yorkshire.	Yes - -	They are well washed with water, and afterwards disinfected with chloride of lime.	Station agents and inspectors.	Yes, as often as is necessary. Agents and inspectors are responsible.	Yes; copies sent herewith.	Yes; see clauses 4, 5, 6, 7, in General Order, No. 308.	Only one instance of disease has occurred on this line up to the present time.	The cattle trucks of this Company are not covered, and there would be considerable difficulty in providing covered trucks.	No; the distances which cattle are conveyed over this line are not so long as to render necessary any arrangement for watering or feeding cattle, and generally men who have charge of the cattle travel with them and attend to them.	See answer to preceding question.	No, we have not found it necessary to use such trucks, for the reason stated in the answer to question No. 9.	Copies sent herewith - - -	Lancashire & Yorkshire.
London and Blackwall.‡													London and Blackwall.
London, Brighton, and South Coast.	Yes - -	They are thoroughly scraped and disinfected. See Rule 4 in attached circular.	The station agents and foremen.	Yes; by station masters, as occasion requires.	See three notices attached.		Only one case has been reported.	All our trucks are covered.	No, our distances being so short; but there are troughs in the principal station yards.	See answer to questions 9 and 10.	Three notices enclosed - -		London, Brighton, & South Coast.

those Answers will be found in pp. 56–63.

* The following letter was forwarded with the answers:—

Great Western Railway, General Manager's Office, Paddington Station, London, 16th December 1865.

Sir,

In forwarding the replies to the inquiries made by the Royal Commission, I have to state that the Directors of this Company have continuously given their most anxious consideration to the subject, and they will be willing to fall in as far as possible with any regulations that can be laid down for the conveyance of live stock, or, if necessity should require that for a time the traffice should be discontinued, they will be prepared to make such arrangements as may be necessary, and to afford every facility for the transit of meat to the metropolis and between all the places through which the railway passes.

I am, &c.

J. Grierson.

† The following letter refers to a case of disease observed on the Great Western Railway in December 1865.

Great Western Railway, General Manager's Office, Paddington Station, London, 30th December 1865.

Sir,

You will have observed in the "Times" of the 23rd inst. a paragraph stating that two trucks of cattle were conveyed by the Great Western line to Birmingham, found to be diseased, and ordered to be destroyed by the cattle inspector; and I beg to explain that when the cattle were delivered to this Company at Wrexham they were examined and certified by the cattle inspector to be free from disease, and might be allowed to travel for the purpose of slaughter.

On arrival at Birmingham the Company's foreman observing something which induced him to think that one of them had not been in a healthy state, called in the cattle inspector, who required them to be killed upon the spot, but allowed the carcases of all of them to be removed, with the exception of one, which was buried seven feet below the surface and covered with quick-lime.

The trucks were thoroughly cleansed out and disinfected with chloride of lime and afterwards painted; and they will not be allowed to be used for any purpose whatever for a short time.

I am, &c.

J. Grierson.

‡ The following letter was received in reply:—

London and Blackwall Railway Company, Offices, London Terminus, Fenchurch Street, E.C., 15th December 1865.

Sir,

I am instructed to acknowledge receipt of your circular letter of the 11th inst., addressed to the Chairman of the Board of Directors of this Company, requesting answers to certain questions having reference to the conveyance of cattle by railway, for the information of Her Majesty's Commissioners for inquiring into the origin of the Cattle Plague.

In reply, I have to acquaint you that no cattle are conveyed upon this railway, and that the Company do not possess any cattle trucks.

I am, however, desired to acquaint you that cattle from foreign ports are landed, under the superintendence of the Customs, at the Brunswick wharf, Blackwall, and driven thence by road to market. Upon this wharf there is a warehouse which is used in connexion with the business, and after each cargo is landed the warehouse is thoroughly cleansed and disinfected with chloride of lime, and the walls, &c. are occasionally washed with lime.

I am, &c.

John F. Kennell, Sec.

Copies of the Documents referred to in these Answers will be found in pp. 56-63.

Name of Railway Company.	1. Are the cattle trucks on the Company's railway cleansed after every journey?	2. How are they cleansed? Is any and what disinfectant employed in cleansing them?	3. Who is responsible for their being properly cleansed?	4. Are the pens or yards belonging to the Company, into which cattle are driven before being put into the trucks or after being discharged from them, cleansed, and how often, and who is responsible for this?	5. Are any general directions or regulations issued to the officers or servants of the Company on the above heads?	6. Are any general directions issued to the Company's officers or servants respecting cattle, in the Company's trucks or pens, appearing to be diseased?	7. If so, in how many instances have these directions been acted on since the 1st of June last?	8. Are any (and, if so, what proportion) of the trucks in which cattle are conveyed covered, wholly or partially, at the top or sides? Would there be any difficulty in providing covered trucks, or any objection to it?	9. Are there any general directions or regulations respecting watering or feeding of cattle during a journey, or for enabling them to be watered or fed, if desired by the owner or his agent?	10. If such facilities for feeding or watering are given, are they often used; or is the inconvenience of unloading trucks of the ordinary construction and loading them again found to be an obstacle to this?	11. Are trucks which enable cattle to be watered and fed without being removed on the journey in use on your railway? Have the Directors considered the expediency of adopting them, and do they see any objection to it?	12. Please to furnish a copy of any general directions or regulations which may be in force on the Company's railway on any of the above heads, or respecting cattle traffic in general, specifying which, if any, of them are temporary, and which of them have been issued since the 1st of June last?	Name of Railway Company.
London, Chatham, and Dover.	As a rule the trucks, if fouled, are cleaned out.	When the Cattle Plague first broke out, the whole of the cattle trucks were disinfected by thorough washing and scraping, and by limewashing thoroughly. This is repeated from time to time.	Cattle inspector and station agent.	Yes, as frequently as possible, and under the instructions of station agent and cattle inspector.	Circulars (copies of which are attached) have been issued to all the staff.		No case has arisen of diseased cattle being present at a station, or detected while on the railway.	All the cattle trucks have roofs, but are open at the sides. Considerable difficulty would be experienced in providing trucks entirely enclosed, and there would be delay and damage in loading cattle in such trucks, besides imminent risk to the stock from suffocation.	As cattle are generally carried on this line in special trains, and the whole distance run is short, no necessity appears to have arisen for any systematic watering; but a cattle inspector, specially appointed to attend to this business, generally travels with the trains and sees that the animals are attended to properly.	See former answer -	Yes - - -	The treatment of cattle is regulated by the inspector before adverted to, who visits the various stations and instructs the staff.	London, Chatham, and Dover.
London and North-western.	Stringent orders have been issued for the cattle trucks to be cleansed.	They are ordered to be swept out, whitewashed and disinfected with a powder of which chloride of lime forms the principal ingredient.	The agents at the respective stations.	After the removal of each lot of stock. The agent is the responsible party.	Prints of circulars herewith.	Prints of circulars herewith.	Only one case has arisen.	1,500 trucks in all, of which 385 are covered.	As regards the journey, no arrangements are in force for watering or feeding cattle; but at different points where cattle are received facilities are afforded to consignors and owners of stock.			Prints of circulars herewith -	London and North-western.
London and South-western.	Yes, as a general rule.	Washed out with chloride of lime.	The superintendents at the various stations.	Occasionally -	Yes - -	Yes -	Cannot state this.	A portion covered at the top, all covered at the sides.	No regulations, but every facility given.	Very seldom used -	No; the journeys are not so long as to require this.	Herewith - - - - -	London and South-western.
Manchester, Sheffield, & Lincolnshire.	Yes - -	With lime-wash and McDougall's disinfectant.	The station masters and inspectors.	Pens cleansed regularly and limewashed. Station masters and inspectors responsible.	Yes. Rule 251 in the Company's general regulations requires "cattle waggons to be thoroughly cleansed immediately after being unloaded;" and since the outbreak of the cattle plague special instructions have been issued requiring all cattle waggons to be thoroughly disinfected in addition.	Yes. The Company's servants have been instructed to prevent any cattle which appear to be suffering from disease from coming on to the Company's premises, and in the event of such being offered, or received loaded at any station to give immediate information to the duly authorized public officer.	No single case of cattle plague has come under our observation.	About half our stock of cattle waggons are covered. All new waggons are ordered to be covered.	We have no regulations in reference to watering or feeding of cattle during a journey, nor have we ever received any application from owners of cattle to perform such service.	The unloading and loading again of cattle for the purpose of watering would be a serious inconvenience.	The cattle trucks in use on this railway are of the kind in use on all railways, and are not so fitted up as to enable cattle to be watered and fed without being unloaded.	Copies of regulations attached hereto, as requested.	Manchester, Sheffield, & Lincolnshire.
Midland.	Yes - -	By limewash and carbolic acid.	The station master or agent.	They are cleansed twice a day according to the amount of traffic. The station agent is responsible for this being done.	Yes - -	No - - -	See No. 6.	217 covered, 230 uncovered. No objection; all renewed stock are being made covered.	If necessary, water is given the cattle. The feeding is seen after by owners or their servants, who accompany them.	See No. 9	No. They have considered it; but not yet decided to adopt them.	Herewith - - - -	Midland.
Midland Great Western (of Ireland).	Yes - -	Scraped and swept. Saw dust and bog mould.	Cattle platform foreman.	Yes, daily. Cattle platform foreman.	Yes - - -	No - - -	See No. 6.	Cattle are conveyed in partially covered and uncovered waggons.	None - - - - -	- - - - - -	No - - -	Circular attached - - -	Midland Great Western (of Ireland).
North British	They are ordered to be cleansed after every occasion of their being used.	They are scraped and washed with hot water when it can be procured; with cold water when it cannot be procured.	The station agent receiving the truck is responsible for the truck being properly cleaned.	The pens or yards are cleaned after use. The station agent is responsible for the duty.	The station agent has general directions on the above subjects.	There have been no general directions respecting cattle in the Company's trucks or pens appearing to be diseased, but instructions will be issued at this date.		A number of the Company's trucks, the last built, have been covered at the top and ends. There would be difficulty in so covering the ends and tops of waggons originally constructed.	There are no directions or regulations respecting the watering or feeding of cattle during a journey, or for enabling them to be watered or fed. There have been no demands on the Company for such provisions being made. The necessary speed of the trains by which the cattle are conveyed forbids the watering or feeding of cattle by such trains, unless they be shunted from the train to the station and resume their journey by a subsequent train. To do this, no one would object more than the owners of the cattle themselves. It would be physically impossible to water and feed cattle on the respective journeys occupying the respective periods. The Company do, however, carry the servants of the owners of the cattle in their trains free, for the purpose of attending to the cattle. The difficulty of watering and feeding does not depend on the construction of the waggons, but on the delay absolutely necessary to the discharging, feeding, reloading	There have hitherto been no trucks constructed which would admit of cattle being fed in there, nor is it thought that such trucks can be constructed.	Copies herewith - - - -	North British.

Copies of the Documents referred to in these Answers will be found in pp. 56-63.

Name of Railway Company.	1. Are the cattle trucks on the Company's railway cleansed after every journey?	2. How are they cleansed? Is any and what disinfectant employed in cleansing them?	3. Who is responsible for their being properly cleansed?	4. Are the pens or yards belonging to the Company, into which cattle are driven before being put into the trucks or after being discharged from them cleansed, and how often, and who is responsible for this?	5. Are any general directions or regulations issued to the officers or servants of the Company on the above heads?	6. Are any general directions issued to the Company's officers or servants respecting cattle in the Company's trucks or pens appearing to be diseased.	7. If so, in how many instances have these directions been acted on since the 1st of June last?	8. Are any (and, if so, what proportion) of the trucks in which cattle are conveyed covered, wholly or partially, at the top or sides? Would there be any difficulty in providing covered trucks, or any objection to it?	9. Are there any general directions or regulations respecting watering or feeding of cattle during a journey, or for enabling them to be watered or fed, if desired by the owner or his agent?	10. If such facilities for feeding or watering are given, are they often used; or is the inconvenience of unloading trucks of the ordinary construction and loading them again found to be an obstacle to this?	11. Are trucks which enable cattle to be watered and fed without being removed on the journey in use on your railway? Have the Directors considered the expediency of adopting them, and do they see any objection to it?	12. Please to furnish a copy of any general directions or regulations which may be in force on the Company's railway on any of the above heads or respecting cattle traffic in general, specifying which, if any, of them are temporary, and which of them have been issued since the 1st of June last?	Name of Railway Company.
North-eastern	Yes - -	They are scraped and swept out. Chloride of lime is used in cleansing them.	The agents at the principal stations are primarily responsible. They report weekly to the district inspector, who is constantly going over his district to see that the work is properly done.	The yards are cleansed weekly, the agents at the several stations being responsible.	Yes; see copies attached.	Their orders are not to receive any such cattle, but to report the circumstance immediately to the nearest police officer or magistrate, as well as to the goods manager of their district. If such cattle arrive from any other station, they are at once to inform the cattle inspector appointed by the magistrates.	Three or four times since the orders were issued.	About half the cattle waggons in use on this railway are covered at the top, and all are covered partially at the sides. All the cattle waggons built during the last three years, whether as additional stock, or to replace old ones, have covered tops. There would be difficulty in putting covered tops to waggons originally built as open waggons.	No. Cattle cannot be fed and watered without being untrucked. This causes great delay and a certain amount of injury. When drovers are not present the Railway Company knows nothing of the ownership of the individual animals, but only that those in a particular waggon belong to a particular person. If the animals were untrucked, they would get mixed, and the waggon at the end of the journey would be found to contain different stock from that which was put into it at starting, and serious questions of liability and endless confusion would arise. The owners of cattle going short distances would not allow their cattle to be detained because there were cattle in the same train going long distances which were to be fed and watered on the journey. Cattle also are frequently carried in goods trains, and the goods could not be detained while the cattle were being untrucked, fed, watered, and loaded again. Dealers prefer that their cattle be carried through as quickly as possible.	See previous question and answer.	There are no such trucks in use on this railway, and the Directors have not considered the expediency of adopting them.	See answer to question 5 - -	North-eastern.
North Staffordshire.	Yes - -	By well washing and scraping them. The disinfectants used are caustic soda, quicklime, chloride of lime.	The Company's foreman at Stoke and the agents or station masters at the various stations.	Yes, they are cleaned every time; and the same persons are responsible as stated under No. 3 question.	Yes - - -	Yes - - -	I do not understand this question, unless it means, In how many instances have we discovered that we were conveying diseased cattle, or, In how many instances have we refused to carry cattle on account of disease? In which we have not had a single known case of disease.	Our cattle waggons are neither wholly nor partially covered.	We have no general directions or regulations as to watering or feeding cattle during a journey; but the owner or his agent can, if desired, water or feed his cattle on the average every fifteen miles or so.	The facilities for watering are occasionally used for feeding, but very rarely; the inconvenience of unloading trucks and loading them again would beyond doubt be a very serious obstacle, unless once or so, on a very long journey.	No; but with a bucket there is not the slightest difficulty in watering cattle in the trucks now in use on this railway, nor do I see any great difficulty in feeding them.	Copy of instructions attached -	North Staffordshire.
Scottish North-eastern.	They are -	Washed, and then whitewashed with lime. No other disinfectant used.	The station agents.	There have been no orders issued to clean the pens or yards on every occasion; but as that may be necessary the station agents will be instructed to have it done.	Enclosed are copies of three orders, one issued on 17th August, another on 4th September, and another 21st October.	No diseased animal is allowed to enter the Company's premises, nor anywhere without a certificate from a district inspector that they are free from disease.	In no instance -	All open. It would take a long time and considerable expense to cover all trucks, and the covering increases the weight.	There is no provision for watering and feeding on this line. The journey is short; and the Company have never been asked to make any provision.	- - -	The attention of the Directors has never been called particularly to the subject.	See the copies referred to in answer to No. 5. Besides these, the goods manager has been advising the agents in any special cases.	Scottish North-eastern.
South Devon	Yes, after they have been used for conveyance of cattle.	Washed out with water and sprinkled with Burd's disinfecting powder.	The officers in charge of the respective stations.	The pens are occasionally whitewashed.	Yes - -	Instructions are given not to receive diseased cattle, and to require the certificate of senders that their cattle are free from disease. If, notwithstanding these precautions, the disease should subsequently appear, the Company would desire to know how they are to act.	See last answer	Most of the cattle trucks are covered. No objection except that of expense would exist to the covering of the remainder.	None. The length of the South Devon Railway, from Exeter to Plymouth, is 53 miles, and a water trough exists at the latter station for use of cattle on arrival or departure. Our rates do not include the cost of food. In any extreme case the station master would use his discretion as to feeding or watering cattle, and special instructions given by consignors would be attended to.		The trucks are not provided with conveniences for feeding and watering; and having regard to the length of the South Devon Railway, and to the fact that no representations are made by owners on the subject, it would not appear necessary to provide them.	Furnished - - - - -	South Devon.
South-eastern	Yes - -	By limewashing	The station masters	They are frequently cleansed, but not as a rule immediately before or immediately after being used. The station masters responsible.	Yes - -	No; but certainly no cattle having the appearance of disease would be received.	See No. 6. We are not aware of any being carried which were diseased.	None covered at the top, all are partially covered at the sides. It would be objectionable.	No; but there are at some of the stations water troughs.	Entirely at the discretion of the drovers. No.	No. The journeys are so short that there is not any necessity.	See instructions attached - -	South-eastern.

COPIES OF DOCUMENTS REFERRED TO IN THE ABOVE ANSWERS.

GLASGOW AND SOUTH-WESTERN RAILWAY.

Order, No. 36.—Notice to Agents.—Cattle Plague.

To prevent the spread of this cattle disease, it will be necessary you see that every waggon in which cattle arrive at your station be washed out before you send it away to any other station, however loaded; and when you have reason to suppose the cattle using the waggon have been diseased, you will be careful in seeing that it is not only properly washed, but disinfected, and that this disinfecting is extended to all troughs, sheds, pens, or anything they have come in contact with, which is likely to be used by other cattle.

A supply of disinfectant (chloride of lime) is sent herewith. When this is nearly done, you will be good enough to apply to me for a fresh supply. This lime must be kept dry and covered up.

W. Johnstone,
General Manager.

General Manager's Office,
Glasgow, 10th Aug. 1865.

Order, No. 40.—Notice to Agents.—Cattle Plague.

The company's agents at the various stations are desired to decline conveying any animal that by their own observation they may consider diseased, and to guide them in this, an excerpt from the Order in Council, signed "Arthur Helps," and dated the 11th August 1865, is hereto appended.

[Here follows the description of the symptoms of disease given in the Order of Council.]

W. Johnstone,
General Manager.

General Manager's Office,
Glasgow, 23rd Aug. 1865.

GREAT EASTERN RAILWAY.

Important.—The Cattle Disease.

G. C. 93.

Manager's Office, Bishopsgate Station,
August 10th, 1865.

All cattle trucks immediately the cattle have been unloaded must be thoroughly cleansed with a bass broom and scraper, the manure so removed being taken at once to the manure pit and there covered with lime.

The truck floors immediately the dung is removed must be thoroughly saturated with lime.

The cattle pens must be swept out as frequently as they are used, and on no account is dung to be allowed to accumulate in them. The pens to be thoroughly saturated with lime in the same manner as the trucks.

For the foreign cattle, through Harwich and Thames Haven, trucks will be set apart specially, and under no circumstances are they to be used for home cattle. They will all be distinguished with a distinctive mark, thus ◆ in white paint, on each side.

I claim your very particular attention in seeing that these instructions are strictly carried out, and if you have not the necessary articles on hand, you may at once purchase brooms, scrapers, and lime.

The accounts for what you purchase must be rendered to the accountant in the ordinary course, this circular being quoted as your authority.

Acknowledge.

Yours obediently,
R. Moseley.

The Cattle Disease.

G. C. 96.

Manager's Office, Bishopsgate Station,
Sir, August 30th, 1865.

Attached herewith I beg to hand you extract from certain Minutes passed at the Council Chamber, Whitehall, on the 11th day of August 1865, respecting the cattle disease.

Be good enough to take care that you render every possible assistance in the carrying out of the instructions which they contain.

It is the anxious wish of the directors to do everything in their power to stay or ameliorate the disease.

Yours obediently,
R. Moseley.

The Station Master,
_____ Station.

[Here follow extracts from the Order in Council of the 11th August, authorizing Mayors and Justices to appoint Inspectors, &c., &c.]

Important.—Cattle Disease.

G. C. 97.

Manager's Office, Bishopsgate Station,
August 29th, 1865.

Referring to my circular, G. C. 93, of 10th instant, I find a misunderstanding exists at some stations as to how the lime is to be used. It is not to be used dry, but must be mixed. Take one pound and a half of Dorking or unslacked lime, and add four quarts of water; allow the lime to dissolve, and when dissolved, well mix it, and then with brush saturate the floor of trucks or pens with the lime wash: care of course being taken to first clean out the trucks or pens of the manure. Lime mixed in the same way is also to be used to saturate the manure pits.

The insides of trucks need not be whitewashed for home cattle. They are to be so only in the case of foreign cattle, as stated in the circular referred to.

Acknowledge.

R. Moseley.

Mr. _____

Station.

Cattle Disease.—Circular, G. C. 97, August 30th.

G. C. 98.

Manager's Office, Bishopsgate Station,
August 30th, 1865.

Referring to the above, it must be clearly understood that the order as to the cleansing of trucks refers to foreign cattle trucks received on our line, as well as our own.

R. Moseley.

The Cattle Disease.

G. C. 99.

Manager's Office, Bishopsgate Station,
September 2nd, 1865.

I send for your information copy of Minute passed at the Council Chamber, Whitehall, on the 26th instant, by the Lords of Her Majesty's Most Honourable Privy Council.

As I have before informed you, it is the desire of the directors to afford every possible assistance in preventing the spread of the cattle disease, and if any cattle should be tendered to you afflicted with the disease, you are to refuse to receive it.

Please acknowledge.

R. Moseley.

[Here follows a copy of the Order in Council of the 26th August 1865.]

The Cattle Disease.

G. C. 106.

Manager's Office, Bishopsgate Station, London,
Sir, September 26th, 1865.

At the foot hereof I beg to hand you copy of Minutes passed at the Privy Council on the 22nd inst., and you will be good enough to see that strict attention is paid to them, so far as they refer to the railway.

In my previous circulars respecting the cleansing of cattle trucks, and the saturating of them with lime, I referred to bullock waggons only, but commencing immediately the same instructions must apply to sheep cages as well, and also to all trucks of whatever kind used for the conveyance of the animals enumerated in the Minutes of the Privy Council.

Please note and acknowledge.

Yours obediently,
R. Moseley.

[Here follows a copy of the Consolidated Order of the 26th September 1865.]

THE CATTLE DISEASE.

G. C. 128. Manager's Office, Bishopsgate,
December 6th, 1865.

SIR,

ATTACHED hereto I beg to hand you copy of Minutes passed at the Council Chamber, Whitehall, on the 23rd November last, and to direct your particular attention to them.

At no time was a strict adherence more necessary to the instructions you have for the purifying of the cattle trucks, cattle pens, and manure bins, than now. The disease, unfortunately, is on the increase, and the directors are determined to leave nothing undone which it is in their power to do to stay it.

Please acknowledge. Yours obediently,
R. MOSELEY.

[Here follows a copy of the Order in Council of the 23rd November 1865.]

GREAT NORTHERN RAILWAY.

(Circular). Goods Department,
London, August 9, 1865.

I HAVE to call the particular attention of the staff to a circular just issued by the National Association for the Prevention of Cattle Diseases,—copy herewith—and to remind all concerned of the instructions already issued, to carefully sweep out and cleanse all cattle waggons after the cattle is unloaded.

I have further to request that the cattle pens and water troughs be kept clean; that any trucks suspected to have been loaded with diseased cattle be thoroughly washed with chloride of lime and water, and that no cattle known to be diseased be accepted for conveyance. Any necessary outlay required for extra labour or chloride of lime for this special purpose, to be charged through the fortnightly pay sheet or district disbursement sheet in the usual way.

JOHN ASHLEY,
Goods Manager.

National Association for the Prevention of Cattle Diseases.

48, Pall Mall, S.W.,
August 5, 1865.

To the Chairman and Directors of the Great Northern Railway Company.

GENTLEMEN,

I AM directed by the Committee of the National Association for the Prevention of Cattle Diseases to draw your attention to the daily extension of the Russian cattle plague, from the transmission of infected and actually diseased stock by railway, or by other means of conveyance. The Committee desires me to suggest that all trucks used for cattle should be kept in a state of the most perfect cleanliness, and in addition to thorough washing by means of water, use should be made of some efficient disinfectant.

I am also directed to point out the great danger of a practice, which is by no means uncommon, of conveying provender and manure in trucks used for the transfer of cattle.

I am, Gentlemen,
Your obedient Servant,
GEORGE ARMATAGE,
Secretary to the Association.

CATTLE DISEASE.

Notice is hereby given, that the officers and servants of this Company have instructions not to receive for conveyance, or allow to remain on the Company's premises, any cattle believed, on reasonable grounds, to be affected with contagious disease, and senders of stock are reminded of the 20*l.* penalty to which they are now liable for consigning diseased cattle by railway.

HENRY OAKLEY,
Secretary.

King's Cross Station,
August 29, 1865.

CATTLE DISEASE.

(Circular). Goods Department, Manager's Office,
London, October 23rd, 1865.

WITH reference to my instructions dated 9th August last, I have to direct attention to the accompanying circular from the Royal Agricultural Society, setting forth the nature of the disease and the necessity for continuing the most stringent measures to prevent its spread.

No precaution must be omitted by the Company as carriers, particularly as regards the acceptance of diseased stock for conveyance, and the cleanliness of the waggons and pens, and as far as possible the directions contained in the Royal Agricultural Society's circular must be adhered to.

JOHN ASHLEY,
Goods Manager.

[Here follows a circular issued by the Royal Agricultural Society of England on the 30th August 1865. It calls attention to the infectious and fatal character of cattle plague; describes the symptoms commonly observed in that and other cattle diseases; specifies various precautions which should be observed in the purchase, housing, treatment, and conveyance of cattle; and remarks upon several other points.]

GREAT SOUTHERN AND WESTERN (OF IRELAND) RAILWAY.

CATTLE PLAGUE.

THE directors have ordered that most particular and urgent instructions be given to station masters to personally see that all trucks arriving at stations, under live stock, be well and effectually cleaned, and when practicable to be washed; and in event of cattle being offered for conveyance by rail, in which there is no reasonable doubt the plague exhibits itself, such cattle shall be refused admission to the company's premises, and report at once made to this office. Station masters will likewise report if they hear that the disease has made its appearance in their neighbourhood.

GREAT WESTERN RAILWAY.

CATTLE TRUCKS.

(C. 92.)

General Manager's Office, Goods Department,
DEAR SIR, Paddington, October 17th, 1857.

COMPAINTS are made that the Cattle trucks are not regularly cleaned out, and that in some cases, in consequence of the accumulation of manure in the bottom of the trucks, the value of the cattle has been seriously deteriorated.

In future, cattle trucks arriving at your station must be immediately cleaned out after the cattle are discharged; and any instance of "empty cattle trucks" not being clean when received at your station, to be reported to me, giving the name of sending station.

Yours truly,
J. GRIERSON.

DIRTY CATTLE TRUCKS.

(C. 190.) General Goods Manager's Office,
DEAR SIR, Paddington, January 26th, 1861.

REFERRING to my circular 92, of October 17th, 1857, (copy of which I annex), which appears, from the numerous complaints that are made of cattle trucks being used without being properly cleaned out, is not attended to, I have to request that in future the instructions contained in that circular be strictly carried out.

Dirty cattle trucks are injurious to the trucks as well as to the cattle, and in both ways to the company's interests—and you will please let it be understood that any person sending away a cattle truck uncleaned will be liable to be brought before the directors.

Please acknowledge. Yours truly,
J. GRIERSON

(Circular No. 45.)

General Manager's Office,
Paddington, August 11th, 1865.

In consequence of the cattle plague having appeared in this country, the following regulations are to be strictly carried out throughout the line.

If any cattle are tendered for conveyance, and you have reason to suppose that any of them are infected with the cattle plague, you must decline to receive them, or permit them to come on the company's premises.

If cattle which have been diseased, or which you have reason to suppose are infected, are received at your station from any other station, the trucks in which they have been carried must immediately be thoroughly cleansed; and no such trucks are, under any circumstances, to be again used for the conveyance of cattle, or any description of traffic, until they have been cleaned with water, and afterwards disinfected with chloride of lime or such other disinfecting fluid as may hereafter be found the most efficient; and the trucks are not even then to be employed for any purpose until they have been repainted, if there is the slightest reason to fear that they still retain any trace of the disease so as to cause infection.

Any cattle that have been killed, or may be found dead in the trucks, in consequence of the disease, must be immediately buried in their hides at a depth of not less than five feet, and straw, manure, &c., taken out of any truck in which cattle supposed to be diseased have travelled, or which may be collected at any place where they have stood, must, in like manner, be buried; and, in both cases, quick lime is to be used before covering in.

Any person cleaning out the trucks, or in any way coming in contact with diseased cattle, must not again assist in the loading of cattle on the company's premises, or go near them elsewhere, until his clothes have been thoroughly disinfected, and sufficient time has elapsed to prevent the possibility of contagion; and no shovel, broom, or other article used in cleaning the trucks, &c., must be again used until proper steps have been taken, to the satisfaction of the company's or the public cattle inspector, to insure that there will be no risk of their communicating infection.

If any diseased cattle are tendered for conveyance, or have been conveyed on the line, immediate notice must be given to the public cattle inspector, the chief constable or superintendent of police, and a full report must be sent to the district goods manager, and the company's cattle inspector.

For your information I annex a copy of an Order of the Privy Council on the subject, dated the 24th July.

Please acknowledge. J. GRIERSON,
General Manager.

P.S. The ordinary regulations as to the cleansing of cattle trucks must be strictly adhered to, in accordance with my previous circulars, and you must see that every cattle truck on arriving at your station is immediately cleaned out after the cattle are discharged; and any instance where empty cattle trucks are received at your station in a dirty state must be at once reported to the district goods manager, giving the name of the sending station.

[Here follows a copy of the Order in Council of the 24th July 1865.]

LANCASHIRE AND YORKSHIRE RAILWAY.

PREVENTION OF CATTLE DISEASES.

General Order No. 307.

Traffic Manager's Office, Hunt's Bank,
Manchester, August 15th, 1865.

WITH a view as effectually as possible to prevent the extension of cattle diseases, the directors have ordered that each truck laden with cattle shall immediately, on its arrival at the station to which it is consigned, and on the cattle being taken out of it, be thoroughly swept and cleaned with a besom, and in all cases where it is possible, that it shall also be washed out with water.

It may hereafter be desirable to use a disinfecting fluid or powder, but on that subject you will, if necessary, have further instructions from me. The sweeping and washing out of the trucks will no doubt to a great extent accomplish the object which the directors have in view.

JAMES SMITHELLS.

PREVENTION OF CATTLE DISEASES.

General Order No. 308. Traffic Manager's Office,
Manchester, August 24th, 1865.

REFERRING to my circular No. 307, of the 15th instant, I have to request that you will strictly carry out the following additional instructions on the subject:—

1. The regulations already issued as to sweeping and washing cattle trucks on arrival at a station, and after the cattle have been discharged, are to be adhered to, in accordance with my circular of the 15th instant.

2. Cattle pens and stages and water troughs are to be kept clean, and, when necessary, the disinfectant referred to in clause 3 is to be applied to the cattle pens and stages.

3. All cattle trucks, after they have been swept and well cleaned with water, must be washed with a solution of chloride of lime and of sulphuric acid and water, a supply of which articles will be sent to you on application to Mr. Badge, stores department, Miles Platting. About a quarter of a pound of chloride of lime should be mixed with a gallon of water, to which must be added half a pint of the sulphuric acid and water, which you will receive from the stores ready mixed. The mixture of chloride of lime and sulphuric acid should be put into a bucket and applied to the waggons with mops or brushes; the buckets, mops, or brushes so used must not be applied to any other purpose.

4. If any cattle are tendered for conveyance which you have reason to suppose are infected with the cattle plague, you must decline to receive them, or permit them to come upon the company's premises.

5. If cattle which have been diseased, or which you have reason to suppose are infected, are received at your station from any other station, the trucks in which they have been carried must be immediately swept out, and under no circumstances again used for the conveyance of cattle or any description of traffic until they have been washed with water, and afterwards so disinfected as to render their use perfectly safe

6. If any diseased cattle are tendered for conveyance, or have been conveyed on the line, or if any cattle have been killed, or may be found dead in trucks in consequence of the disease, immediate notice must be given to the public cattle inspector, the superintendent of police, or any other duly authorized public officer, and his instructions must be acted upon. A report of the case must at the same time be also sent to me.

7. Any person cleaning out the trucks, or in any way coming in contact with diseased cattle, must not again assist in loading cattle on the company's premises, or go near them elsewhere, until his clothes have been thoroughly disinfected, so as to prevent the possibility of contagion; and no shovel, broom, or other article used in cleaning the trucks, &c., must be again used until proper steps have been taken to satisfy the public cattle inspector that there will be no risk of their communicating infection.

JAMES SMITHELLS.

To Station Agents and others. Traffic Manager.

PREVENTION OF CATTLE DISEASE.

General Order No. 311.

Traffic Manager's Office, Hunt's Bank,
Manchester, September 27th, 1865.

REFERRING to General Order No. 308, it has been decided to discontinue the use of the sulphuric acid mixture, and only to use chloride of lime and water, which must be applied to cattle waggons in accordance with the instructions contained in my previous order above named. The other portions of the order must be adhered to until further notice.

JAMES SMITHELLS.

LONDON, BRIGHTON, AND SOUTH-COAST RAILWAY.

Important Circular to Superintendents, Station Masters, Goods Clerks, and all others concerned.

CATTLE PLAGUE.

Circular 294. 16th August.

I AGAIN have to call your attention to the disease now existing amongst cattle, and to request that you will carry out strictly the following instructions, in order that the extension of the disease may be prevented, so far as the conveyance of stock by this line is concerned:

1st. Any cattle presenting symptoms of infectious disease must not be received for conveyance upon this railway.

2nd. In the event of any diseased cattle being tendered for conveyance, full particulars must be sent to me, giving the names and addresses of the senders and consignees.

3rd. Should cattle which you have reason to suppose are infected be received at your station from any other station, the trucks in which they have been carried must not under any circumstances be again used for the conveyance of cattle until they have been thoroughly cleansed

with water, and afterwards disinfected with chloride of lime.

4th. All cattle waggons must be scraped out and well washed down with water (under a water crane, if practicable), and then freely sprinkled with chloride of lime, *before being used again*, after each journey.

5th. When the waggons are not required for the conveyance of cattle, they must be worked to Deptford wharf, to be loaded with creosoted sleepers, as a good disinfectant.

6th. Any cattle that have been killed in your station, or may be found dead in the trucks, in consequence of the disease, must be immediately buried in their hides at a depth of not less than five feet, and straw, manure, &c. taken out of any truck in which cattle supposed to be diseased have travelled, or which may be collected at any place where they have stood, must, in like manner, be buried; and, in both cases, quicklime is to be used before covering in. Any person cleaning out the trucks, or in any way coming in contact with diseased cattle, must not again assist in the loading of cattle on the company's premises, or go near them elsewhere, until his clothes have been thoroughly disinfected, and sufficient time has elapsed to prevent the possibility of contagion; and no shovel, broom, or other article used in cleaning the trucks, &c., must be again used until proper steps have been taken to insure that there will be no risk of their communicating infection.

Chloride of lime will be supplied by the storekeeper.

The goods superintendent and his inspectors will take steps, in conjunction with the staff generally, to carry out these orders.

GEORGE HAWKINS,
Brighton Terminus, August 25, 1865. Traffic Manager.

CATTLE PLAGUE.

No. 294. Brighton Terminus, August 16th, 1865.

BELOW I hand you copy of a communication from the Privy Council, and have to request your most particular attention to this important matter:—

"The Clerk of the Council to the Secretary of the Board of Trade.

"Privy Council Office, Whitehall, 5th August 1865.

"SIR,—I am directed by the Lord President of the Council to request that you will have the goodness to move the Lords of the Committee of Council for Trade to communicate with the various railway boards throughout the United Kingdom, as regards the means that may be adopted by them to prevent the increase of the cattle plague, which has lately appeared in this country, and which threatens to be of a most formidable character.

"There is no doubt that the extension of this disease will be greatly aggravated by the traffic on railways, if the utmost attention is not paid to the cleansing and disinfecting of all trucks, cattle sheds at the stations, and all places where cattle are either put upon railways or taken from them.

"The Lord President is anxious that no time should be lost in giving this information to railway boards, and that the Lords of the Committee of Council for Trade should urge upon the directors of the various companies, as a public duty, to take immediate steps for instructing their officers to see that stringent regulations are made and enforced to ensure that cleanliness in all matters connected with the conveyance of cattle which is at the present moment imperatively required.

"I am, Sir,

"The Secretary, Your obedient servant,
"Board of Trade. (Signed) ARTHUR HELPS."

GEO. HAWKINS, Traffic Manager.

SPECIAL NOTICE to all Parties concerned.

DISEASED CATTLE.

THE London, Brighton, and South-Coast Railway hereby give notice that they will not convey cattle suffering from disease, and more particularly if affected by any contagious or infectious disorder, such as is generally called the "Cattle Plague," which may be recognized by the following symptoms.

[Here follows the description of the symptoms of the disease given in the Order of Council of the 11th August 1865.]

The company's servants are instructed not to receive for conveyance any cattle believed on good and sufficient grounds to be so affected, and should any such be tendered or unwittingly conveyed, they are to report to the traffic manager the names and addresses of the senders and consignees of them.

GEO. HAWKINS,
Brighton Terminus, August 25th, 1865. Traffic Manager.

LONDON, CHATHAM, AND DOVER RAILWAY.

Circular No. 92. B.

Goods Manager's Office, Victoria Station,
DEAR SIR, Pimlico, S.W., August 10th, 1865.

THE cattle plague having visited this country with most serious consequences, the regulations following must be rigidly adhered to.

1. Cattle suspected to be infected with the plague may not be received for conveyance by this railway, and every effort must be made to keep them away from the company's premises.

2. If you should have reason to suppose that any cattle, suffering from the disease, have been carried over the line you will, immediately upon the arrival of the train at your station, cause them to be forthwith removed from the limits of your station and at once have the trucks, in which they were conveyed, cleansed with water, and afterwards purified with chloride of lime, or other disinfectant.

3. No truck, having carried diseased stock, may be used for any purpose until it has been thoroughly cleansed and disinfected.

4. Should any diseased stock arrive at your station, dead; or should it be necessary to slaughter any animal affected, you must take immediate measures to effect the burial of carcase and hide to the depth of five feet in the ground.

5. All straw, manure, &c. found in the same truck must be buried (first strewing all with quick lime), or must be consumed by fire.

6. No person who may, in the process of discharging stock, come in contact with a diseased animal must be allowed to assist in loading or unloading cattle on your premises, until you are thoroughly satisfied that his clothes have been disinfected, and that no fear of contagion will arise.

7. Any article used in cleaning out the condemned trucks must pass through the cleansing and disinfecting ordeal.

8. You will be good enough, immediately upon discovery of the disorder, to place yourself in communication with this office, and I rely upon your best exertions not only to see that these instructions are fulfilled, but that all other precautionary measures are adopted to prevent the spread of the disease.

I am,
Yours truly,
Mr._____ C. H. CHAPMAN,
_____Station. Goods Manager.

Circular No. 99. B.

Victoria Station, Goods Manager's Office,
DEAR SIR, Pimlico, S.W., September 1st, 1865.

THE following having become orders of Her Majesty's Privy Council, I have to direct your special attention to my circular No. 92 B, 10th August, and to request that every measure be adopted to exclude from the company's premises all stock which you have reason to believe may be suffering from the cattle disease.

"That it shall not be lawful to send or to bring to any "fair or market, or to send or carry by any railway, or by "any ship or vessel coastwise, or to place upon, or to "drive along any highway or the sides thereof, any animal "labouring under such (contagious or infectious) disease. And "every person offending against the order shall, for "every such offence, forfeit any sum, not exceeding twenty "pounds, which the justices before whom he or she shall be "convicted of such offence may think fit to impose."

Yours truly,
Mr._____ C. H. CHAPMAN,
_____Station. Goods Manager.

LONDON AND NORTH-WESTERN RAILWAY.

Circular No. 549.

General Manager's Office, Euston Station,
London, N.W., August 14th, 1865.

TO STATION AGENTS.—CLEANSING OF CATTLE WAGGONS.

THE attention of the Directors has been called to the disease existing amongst cattle at the present time, and with a view of preventing its extension, so far as the car-

riage of cattle by this railway is concerned, they direct as follows until further notice:—

1. That no cattle presenting any symptoms of infectious disease be received for carriage at any of the stations.
2. That the cattle waggons be thoroughly cleaned immediately after each journey, and that Mr. Salmon, the cattle manager, take steps, in conjunction with the district superintendents and goods managers, to carry out this regulation.
3. That chloride of lime, whitewash, or other disinfectants be used in the cleaning of the waggons.

W. Cawkwell.

Circular No. 551.—Cattle Plague.

The attention of the cattle traffic superintendent, the goods managers, agents, and others concerned, is especially directed to the subjoined extracts from two important Orders in Council, promulgated on the 25th August.

Under one of these orders the removal of any cattle from any port in Great Britain to any port in Ireland is prohibited, under a penalty of 20*l.* for each offence; and, under the latter, it is declared unlawful, under a similar penalty, to carry by railway any animal labouring under the disease known as the cattle plague.

All the officers concerned are enjoined to give proper directions, and use their most strenuous efforts to ensure compliance with the requirements of the Government orders contained in these extracts.

W. Cawkwell,
General Manager.

General Manager's Office,
Euston Square, London, N.W.,
28th August, 1865.

"Extracts from Orders in Council;
Bearing date 25th August.

"That in this order the word 'cattle' shall be interpreted to mean any cow, heifer, bull, bullock, ox, or calf.

"That after the date of the publication of this order in the *London Gazette*, it shall not be lawful for any person to remove any cattle from any port or place within that part of the United Kingdom called Great Britain to any port or place within that part of the United Kingdom called Ireland.

"That it shall not be lawful to send or bring to any fair or market, or send or carry by any railway, or by any ship or vessel coastwise, or to place upon, or to drive along any highway, or the sides thereof, any animal labouring under such disease."

Circular No. 552.—Cattle Plague.

In the event of infected cattle reaching any of the Company's stations from stations on the London and North-western line, or from foreign companies' lines, the agents must lose no time in communicating, where possible, with the municipal authorities of the place, in order that the cattle may be subjected to the inspection of the proper officer.

In case the municipal authorities decline to act, or no local authorities can be found to act, the agent is authorized to employ a veterinary surgeon to inspect the suspected animals; and in the event of his report confirming the suspicions of the agent, the agent is to lose no time in having the infected animals killed and buried, and the trucks purified and cleansed in terms of the order contained in Circular No. 549a.

Cattle proved to be infected arriving at London and North-western stations must, on no account, be returned along the railway to the sending station. Such cattle must be destroyed, under the orders, either of the municipal authorities, of the veterinary surgeon employed by the Company's agent, or, in case of emergency, of the agent himself.

Great care must be taken that all cleaning materials used in sweeping or cleansing cattle waggons or pens which have been occupied by diseased cattle should not be again used until they have been subjected to a disinfecting process. The same observation applies to the clothes worn by porters and loaders who have come in contact with infected cattle, or the trucks in which infected cattle have travelled.

W. Cawkwell,
General Manager.

General Manager's Office,
Euston Station, London, N.W.,
26th August, 1865.

No. 563.—Cattle Murrain.

Referring to my Circulars 551, 555, 559, 561, the Company's officers concerned are again reminded of the urgent necessity for the strictest attention being paid to the directions therein contained, as to the cleansing and purification of cattle waggons, pens, and sheds which may have been occupied by cattle.

Any instance of neglect of these instructions will be visited with the severe displeasure of the Directors.

By order,
W. Cawkwell,
General Manager.

General Manager's Office,
Euston Station,
January 4th, 1866.

No. 568.—Cattle Plague.

With reference to Circulars 551, 555, 559, 561, and 563, it is again reported to the Directors that proper attention is not paid to the cleansing and disinfecting of cattle waggons after discharge of the load.

Agents and others concerned are again informed that this precaution is of primary importance and must not be neglected, under pain of the severe displeasure of the Directors.

The manure removed from the trucks must be placed in detached heaps or pits, and disinfected by lime. On no account must it be sold or dispersed before it is disinfected.

By order,
W. Cawkwell,
General Manager.

General Manager's Office,
Euston Station,
16th January, 1866.

LONDON AND SOUTH-WESTERN RAILWAY.

Circular to the Station Agents.

Goods Manager's Office, Nine Elms Station,
London, 10th August 1865.

Some apprehension is felt concerning the spreading of the contagion said to exist amongst cattle by loading them in trucks that may have carried cattle affected by the disease now prevailing.

It is necessary, therefore, that we should take steps to relieve the mind of the public with regard to this matter, and you will give instructions, therefore, that every cattle waggon, or waggon that may have contained cattle or sheep, on arrival at your station shall be thoroughly swept and cleaned, and sprinkled with chloride of lime as a disinfectant.

The chloride of lime can be obtained on application to the stores department.

You must, yourself, see that these instructions are carried out, and I trust that you will give the matter your personal attention.

James Haddow,
Goods Manager.

Cattle Disease.

Circular to Station Agents.

Goods Manager's Office, Nine Elms Station,
18th August 1865.

I have to call attention to my circular of the 10th inst., with regard to the cleansing of cattle trucks, and I hope the agents are giving the subject their personal attention.

An instance has occurred within the last few days of five cows, affected with the disease now prevailing, having been delivered at a station on this line, and consigned to London.

To prevent spreading of the contagion, it is absolutely necessary that steps should be taken to stop, as far as possible, infected cattle being carried by railway, and the agents should endeavour when cattle (particularly cows) are tendered for conveyance, to ascertain whether the animals are affected by the disease or not, and the agents are instructed that if, in any instance, they find that cattle so tendered are affected, they are to decline to receive the cattle for conveyance over this railway.

Notice of all such cases must be given to me.

James Haddow,
Goods Manager.

Special Notice to all Parties concerned.—Diseased Cattle.

The London and South-western Railway Company hereby give notice that they will not receive for conveyance, or convey, cattle suffering from disease, and more particularly if affected by any contagious or infectious disorder, such as

is generally designated as the "Cattle Plague," which may be recognized by the following symptoms:—

[Here follows the description of the symptoms of the disease given in the Order in Council of the 11th August 1865.]

The station agents are instructed not to receive for conveyance any cattle believed on good and sufficient grounds to be so affected. They must immediately report to the traffic manager when cattle are refused to be received, or when cattle suffering under disease are unwittingly conveyed, in each case giving full particulars and names and addresses of consignors and consignees.

By order,

Waterloo Station, London, 21st August 1865. FREDERICK CLARKE, Secretary.

SPECIAL NOTICE to all Parties concerned.—DISEASED CATTLE.

[Here follows a repetition of the Railway Company's "Special Notice" of the 21st August, which is given above.]

Penalty.

By an Order in Council, dated the 26th August 1865, it is ordered—That it shall not be lawful to send or bring to any fair or market, or to send or carry by any railway, or by any ship or vessel coastwise, or to place upon, or to drive along any highway or the sides thereof, any animal labouring under such disease.

Every person offending against this order shall for every such offence forfeit any sum, not exceeding twenty pounds, which the justices before whom he or she shall be convicted of such offence may think fit to impose.

By order,

Waterloo Station, London, 28th August 1865. FREDERICK CLARKE, Secretary.

MANCHESTER, SHEFFIELD, AND LINCOLNSHIRE RAILWAY.

(General Order, No. 35.)

General Manager's Office,
Manchester, August 16th, 1865.

I HAVE to direct the special attention of clerks in charge and the staff generally, to the annexed copies of circular letters, received from the Lord President of the Privy Council, and from the Committee of the National Association for the Prevention of Cattle Diseases, on the subject of the rapid extension of the cattle plague.

As the disease is infectious, and appears to be readily communicated to healthy animals, it is of the utmost importance that, as cattle trucks may have conveyed diseased cattle, every truck be thoroughly washed and cleansed immediately on being unloaded, and before it is again used. Cattle pens and all other places used in any way for cattle must also be kept thoroughly and perfectly clean.

Every effort must be used by station masters and the staff to prevent the extension of the disease. Rule 228 of "General Instructions" must be carefully carried out, and in addition to the thorough washing and cleansing, lime wash and a disinfectant (a supply of which may be had on application to the storekeeper) must be freely used.

Acknowledge receipt.

R. G. UNDERDOWN,
General Manager.

Mr. _____

_____ Station.

[Here follow the letter from the Clerk of the Council to the Secretary of the Board of Trade, which will be found at p. 59; and the letter from the Secretary of the National Association for the Prevention of Cattle Diseases, which will be found at p. 57.]

General Manager's Office,
Manchester, Sept. 8th, 1865.

(General Order No. 36.)

CATTLE PLAGUE.

REFERRING to my General Order No. 35, August 16th, I have to further direct the serious attention of the clerks in charge and the staff generally, to the following extract from the communication received from the Lords of the Privy Council:—

"8. That it shall not be lawful to send or bring to any fair or market, or to send or carry by any railway, or by any ship or vessel coastwise, or to place upon or to drive along any highway or on the sides thereof, any animal labouring under such disease.

"9. Every person offending against this order, shall for every such offence forfeit any sum not exceeding twenty pounds, which the justices before whom he or she shall be convicted of such offence, may think fit to impose."

The staff are therefore requested to prevent any cattle which there is reason to believe to be suffering from such disease, from coming on to the Company's premises; and should such be offered for conveyance, or received loaded at any station, dead or alive, information must at once be given to the public cattle inspector, superintendent of police, or other duly authorized public officer, and his instructions carried out, and a report of the circumstance at once forwarded to me.

Any person cleaning out trucks which have conveyed diseased cattle, or in any way coming in contact with cattle so affected, must not again assist in loading or unloading trucks until his clothes have been thoroughly disinfected, so as to prevent the possibility of contagion; and no shovel, broom, or other article used in cleansing the trucks, &c., must be again used until proper steps have been taken to satisfy the public cattle inspector that there will be no risk in their communicating the infection.

All the persons in the employ of this Company are again strictly enjoined to use every possible effort to prevent the extension of this serious plague; and I cannot too strongly urge the importance of strictly carrying out the regulations issued on the subject.

R. G. UNDERDOWN,
General Manager.

Mr. _____

_____ Station.

MIDLAND RAILWAY.

Goods Manager's Office,
Derby, 15th August, 1865.

DEAR SIR,

IN consequence of the rapid spread of the cattle disease in this country the company have been requested to adopt such measures as may be necessary, as far as they are concerned, to cleanse the cattle waggons running on this railway. With this view I am instructed to request that you will, on receipt hereof, cause every cattle waggon arriving at your station, loaded, to be well washed, when unloaded, and then to be further washed with lime water, the proportions of lime and water to be about the same as used for whitewashing. You may, if possible, get the lime at your station or in the neighbourhood, and send us the bill for what you have used at the close of each month, until you receive further instructions.

Yours truly,
THOS. WALKLATE,
per E. C. HEWES.

Goods Manager's Office,
Derby, Oct. 7th 1865.

DEAR SIR,

IN reference to our circular of the 17th August, instructing you to have all cattle waggons cleansed when unloaded, please note that the instructions will also apply to sheep vans or cattle waggons loaded with sheep.

Acknowledge receipt.

Yours truly,
THOS. WALKLATE,
per W. FEAST.

MIDLAND GREAT WESTERN (OF IRELAND) RAILWAY.

Circular.) Manager's Office, Broadstone, Dublin,
SIR, 28th August 1865.

YOUR attention has, doubtless, been called by the newspapers to the Cattle Plague now prevailing in England. Happily it has not yet appeared in Ireland; but the directors are desirous to adopt every known means to prevent the infection of cattle entrusted to the company for conveyance over their lines, and I therefore request your particular attention to the following precautions:—

1. All waggons and trucks used for conveying cattle are to be thoroughly washed after each journey, and sprinkled with peat charcoal.

2. Platforms, pens, and other premises used by cattle, are to be cleansed after the removal of every lot of cattle.

You are charged to explain these regulations to your staff, and see them strictly carried out.

Acknowledge receipt.

Yours truly,
W. G. SKIPWORTH.

Mr. _____

_____ Station.

NORTH BRITISH RAILWAY COMPANY.

Cattle Plague.

General Order $\frac{8}{65}$. General Manager's Office,
Edinburgh, 12th August 1865.

To Station Agents and Others.—Immediate and Important.

Every cattle truck received at a station loaded with cattle must, so soon as the stock has been discharged, be immediately cleaned, and if possible washed, in the most thorough manner the means of the station agent will admit of.

Implicit compliance with this order is most important.

Cattle Plague.

General Order No. $\frac{7}{65}$. General Manager's Office,
Edinburgh, 22nd August 1865.

To Station Agents and all concerned.—Immediate and Important.

The storekeeper has instructions to provide every station agent with a supply of lime shells.

Every cattle truck received at a station loaded with cattle must, so soon as the stock has been discharged, be immediately washed with fresh water thickened with the shells of lime and used while warm.

The quantity of lime water to be made at a time should not be large, but should be just as much as will meet the necessities of the moment.

Implicit compliance with this order is most important.

Thos. K. Rowbotham,
General Manager.

Cattle Plague.

General Order No. $\frac{9}{65}$. General Manager's Office,
Edinburgh, 22nd September 1865.

The directors have rescinded the order dated 22nd August with reference to the above.

The washing of cattle trucks with lime water must accordingly be discontinued, but agents must continue to see that the trucks are scraped and cleaned in a thorough manner, and, after which, that they are washed with hot water at such stations where it can be procured.

At those stations where there are no means of procuring hot water, the trucks must be thoroughly washed with cold water.

Cattle Plague.

General Order No. $\frac{17}{65}$. General Manager's Office,
Edinburgh, December 1865.

[Here follows a copy of the Railway Company's "General Order", of the 22nd September, which is given above.]

The attention of station agents is again directed to the order dated 22nd September 1865, of which the above is a copy, and to the absolute necessity for a strict compliance with it.

The station agent at each station will be held responsible for the immediate cleaning of any trucks arriving at his station with cattle, so that they may be in a condition for use before they can be possibly required again. The carrying out of this instruction is therefore a matter which cannot be delayed any time whatever.

The cattle pens and cattle banks at each station must also be cleaned instantly after use.

Should it appear that the company have carried any cattle diseased, or supposed to be diseased, the instructions given as to cleaning of trucks, pens, and cattle banks must, if it were possible, be attended to more strictly.

Thos. K. Rowbotham,
General Manager.

NORTH-EASTERN RAILWAY.

Cattle Waggons.

Goods Manager's Office, 23rd August 1865.

In order to prevent, as far as possible, the extension of the existing cattle disease, it has been arranged that all cattle waggons standing at shall be carefully swept out and disinfected by means of chloride of lime.

The pens and loading places must also be kept perfectly clean, and must from time to time be sprinkled with the solution of chloride of lime.

The water troughs, if you have any, must be kept as clean as possible.

Mr. Barnes will supply you with—

Shovel,
Sweeping brush, } for cleansing the waggons.

Galvanised iron bucket, in which to dissolve the chloride of lime.

Cask of chloride of lime.

Whiting brush, with which to apply the solution.

If you require a larger supply, or when any of the articles supplied require renewing, send in a requisition to Mr. Barnes in the ordinary course.

The waggons must be carefully swept out, special care being taken that the corners be thoroughly cleared of manure, &c.

The chloride of lime must be dissolved in the proportion of about 1 lb. in a gallon of water, which will be about the quantity required for each waggon. The liquid must be applied to the whole of the inside of the waggons, including the top rails and the floors.

Should there be reason to suppose that any waggon has carried cattle suffering from the cattle plague, such waggon must be thoroughly washed with water, and treated with a much stronger solution of chloride of lime before it is again used for the conveyance of cattle.

The chloride of lime must be kept in a dry place, and must be obtained from Mr. Barnes in small quantities, as it becomes less effective if kept long, or exposed to damp.

(Signed) J. Wilson,
Goods Manager.

To Station Masters, Goods Agents, &c.

Circular. General Manager's Office.
York, 1st September 1865.

Considerable alarm has very naturally been excited by the appearance in this country of a disease amongst cattle, known as the "Rinderpest" or "Cattle Plague."

With the view of preventing its spread as much as possible, instructions have been issued by Her Majesty's Privy Council, from which the following are extracted.

[Here follow extracts from the Order in Council of 11th August 1865.]

You will see from the above extracts that the inspectors appointed by the magistrates have full power to enter upon the company's premises, and to give instructions as to the disposal of any diseased cattle which they find there.

These instructions must at all times be implicitly obeyed, and you must also do everything in your power to assist the inspectors in performing their duties.

Should any cattle which you have good reason to believe are suffering from the disease be tendered to you for conveyance by rail, you must refuse to receive them, immediately acquainting the nearest police officer or magistrate with the circumstances. You will also telegraph at once what you have done to the goods manager of the district, and also report to him fully in writing.

Instructions have already been given to the agents at all the larger stations to sweep out and disinfect all cattle waggons when standing at those stations.

The following officers have been appointed to see that these instructions are properly attended to—

Mr. Benson, York for the Southern Division.
Mr. Henderson, Berwick „ Northern Division.
Mr. Josh. Parker, Newcastle „ Carlisle Section.

Should the agent at any of the stations which have not been supplied with chloride of lime, &c., for disinfecting the waggons, receive for the conveyance of cattle a waggon which has not been properly cleaned out, he must ascertain from the guard of the train from what station it was sent, and report to Mr. Benson, Mr. Henderson, or Mr. Parker, as the case may be.

He must also see that before the waggon is loaded it is properly swept out, and that a few handfuls of quick-lime are sprinkled over the floor of the waggon.

All cases of the existence of the disease in your neighbourhood, with the best information you can obtain as to the circumstances, must be at once communicated to one of the three officers named above.

When the ordinary staff at any station is insufficient to carry out the instructions as to the cleansing of waggons, additional men may be employed, and the amounts paid to them may be entered in the goods pay bill.

W. O'Brien.

NORTH STAFFORDSHIRE RAILWAY.

Cattle Plague.

Goods Manager's Office.

Dear Sir, Stoke-upon-Trent, 10th August 1865.

I am instructed to call your attention to the serious distemper which at this time is so prevalent amongst cattle, and to impress upon you (in order, if possible, to prevent the spread of it by railway), the important necessity of paying particular attention to the cleanliness of the cattle pens and cattle trucks at your station.

To effect this object, you must see that every truck is well scraped and washed out previous to loading cattle

in it, and, if necessary, that some disinfectant be mixed with the water used for washing the trucks.

No. 1. As a disinfectant you may use quick-lime mixed with water, until about the consistency of whitewash, and to be used with a brush in like manner.

No. 2. Or, one part by weight of quick-lime and two parts by weight of soda crystals (the common washing soda), also made into a kind of whitewash. This must be used with care, for it is very caustic, and will destroy all paint, &c.

No. 3. Or, one pound of chloride of lime dissolved in about one gallon of water.

It will be advisable, in cleaning the cattle trucks, 1st, to scrape them well; 2ndly, to wash them with solutions, either No. 1 or 2. Afterwards allow them to stand for a short time, and then wash them well out with water, and lastly give them a good sprinkling with the solution of chloride of lime, No. 3.

With respect to the cattle pens, they must be, if necessary, scraped out daily, the floor well dusted with quick-lime, and the timber work well washed with quick-lime, whitewash (No. 1), or solution of chloride of lime, No. 3.

If any cattle are brought to your station to be forwarded by rails, which you know are diseased, you must refuse to receive them. Also, if you have any reason to suspect that they are diseased, you will refuse to receive them, unless the owner produces a certificate as to their healthiness from a veterinary surgeon.

You will be supplied by the stores department with the soda and chloride of lime. Should you have any difficulty in getting quick-lime, let me know.

You will report to this office any cases which may come to your knowledge of diseased cattle having been carried over this railway.

Send by first train all the empty N. S. cattle waggons, which you may from time to time have on hand, to station. A staff is there employed to clean them.

Acknowledge receipt.

Yours truly,
JAMES CORDON.

Mr._____
_____Station.

SCOTTISH NORTH-EASTERN RAILWAY.

IN order to the prevention of the spread of the existing cattle plague, the directors have resolved that, for a time, every cattle truck must be properly cleaned, washed, and then whitewashed with lime before being used for the conveyance of cattle.

A small quanity of lime will be sent you, and about four lbs. of it should be dissolved in a pailful of water, and spread around the inside of the truck with a mop—after all the filth has been removed by scraping and washing.

General Manager's Office,
Aberdeen, 17th August 1865.

CATTLE PLAGUE.

THE attention of station agents is called to the following Order from the Board of Trade regarding the cattle disease, viz.:—"That it shall not be lawful to send "or bring to any fair or market, or to send or carry by "any railway, or by any ship or vessel coastwise, or to "place upon, or drive along, any highway, or the sides "thereof, any animal labouring under such disease." The word "animal" means any cow, heifer, bull, bullock, ox, or calf.

The company must respect the above Order, and you must refuse to permit any such diseased animal being put into any truck, or to lodge anywhere on or about the company's premises.

You must send notice to the inspector of the district immediately on the arrival of any cattle by railway, so that he may have an opportunity of examining the animals before being removed from the station; and if any are diseased, inform the goods manager.

Acknowledge receipt.

WM. ESPLIN,
General Manager's Office, General Manager.
Aberdeen, 4th September 1865.

CATTLE PLAGUE.

IN compliance with a recommendation of the justices of peace in our district, the company will not, until further orders, receive any cattle for carriage on the railway, without a certificate from a district inspector that the same are free from disease.

Acknowledge receipt.

WM. ESPLIN,
General Manager's Office, General Manager.
Aberdeen, 21st October 1865.

SOUTH DEVON RAILWAY.

TELEGRAM sent from the Secretary to all South Devon Stations on the 9th August 1865.

All cattle trucks must be immediately washed out; later, a disinfecting fluid will be sent you.

CATTLE TRUCKS.

9th August 1865.

As soon as you have thoroughly washed out these trucks, the disinfecting fluid, which will be sent you, must be well sprinkled over the trucks, and the bars and sides thereof well rubbed.

Yours truly,
W. H. AVERY.

CATTLE TRUCKS.

21st August 1865.

PLEASE continue to thoroughly cleanse all cattle trucks and use the disinfectant until further notice.

Yours truly,
W. H. AVERY.

CONVEYANCE OF CATTLE.

Plymouth, 18th November 1865.

IN consequence of the cattle disease, which has appeared in several parts of the country, you must, from and after this date, before receiving any cattle for conveyance by railway, obtain a certificate from the consignor declaring that the animals are entirely free from disease, and which declaration please pin to the consignment note. You must not receive any animals for transit that are suffering from disease.

Yours truly,
W. H. AVERY.

Secretary's Office, Plymouth,
DEAR SIR, 1st January 1866.

YOU are requested to ascertain and inform me, whether the local authorities have prohibited traffic in cattle or skins, hides, horses, &c., in the division in which your station is situated.

If such orders have been issued, you must not receive cattle, skins, &c., for conveyance, nor allow such traffic to be unloaded at your stations, until further notice.

L. J. SEARGEANT,
Secretary.

SOUTH-EASTERN RAILWAY.

(Circular.) General Manager's Office,
SIR, August 1865.

WITH the view of preventing, as far as we are able, the spread of the Cattle Plague which has recently appeared in this country, and which threatens to be of a formidable character, I have to call the particular attention of station masters to Rule 497, page 200, of the rules and regulations of 26th November, 1857, and especially relative to the cleansing of all cattle wagons so that "the slides and "rebates of the doorways shall be carefully kept free from "dirt, and the floors of sheep and cattle wagons cleansed "after every journey when carrying sheep or other cattle. "The water-holes in the bottom of trucks and wagons "must also be carefully kept open by probing." It is hoped by adoption of measures of this description to protect clean stock against contamination during transit over the railway in vehicles in which, by chance, diseased cattle may have been previously conveyed.

It will be necessary, in addition to the ordinary cleaning, that every wagon arriving with cattle be well drenched out with lime-water immediately after being unloaded, at least half-a-dozen buckets-full of water being used for the purpose; similar attention being required in cleansing the Company's cattle and sheep pens.

I have only to add that, bearing in mind the object of these arrangements, I rely upon your cordial co-operation in carrying them out.

I am, Sir,
Your obedient servant,
C. W. EBORALL,
General Manager.

APPENDIX D.

RETURNS furnished by W. CAWKWELL, Esq., respecting CATTLE and DEAD-MEAT TRAFFIC on the NORTH-WESTERN and other Railways.

1. STATEMENT of Dead-Meat Traffic.

Received at London and North-western Railway, Camden, for month of September 1865.

SCOTCH.	Tons	Cwts.	LOCAL.	Tons	Cwts.
Aberdeen	85	10	Aylesbury	8	7
Arbroath	4	15	Ampthill	7	0
Alnes	0	2	Atherstone	9	2
Brechin	2	9	Bedford	1	14
Carlisle	13	19	Brockley	1	8
Dundee	1	0	Banbury	4	4
Edinborough	10	18	Bedworth	4	17
Elton	0	15	Brixworth	0	3
Elgin	5	8	Blisworth	1	12
Fochabers	4	19	Buckingham	1	10
Forres	3	17	Coventry	1	17
Fraserburgh	0	4	Crick	1	16
Farnel Road	0	3	Dunstable	4	10
Forfar	36	5	Elmsthorpe	2	8
Glasgow C. R.	53	7	Hinckley	4	19
Glanris	0	3	Higham	3	15
Huntley	4	3	Leighton	10	13
Invergordon	1	7	Leicester	80	3
Kerrimur	0	11	Market Harborough	0	8
Keith	2	19	Meadbourne	1	17
Larbest	5	6	Nuneaton	1	0
Macduff	0	4	Northampton	23	1
Montrose	1	0	Oundle	1	12
Peterhead	48	8	Oxford	2	6
Perth	7	17	Peterborough	8	7
Stonehaven	2	19	Potton	1	4
Burghead	2	11	Rugby	2	19
			Rockingham	2	9
			Roade	0	3
			Seaton	1	6
			Stamford	5	8
			Thrapstone	3	12
			Tring	4	0
			Wolverhampton	0	15
			Welford	2	10
			Weedon	0	10
			Wolverton	0	12
			Winslow	5	1
			Wellingborough	2	7
			Woburn	1	15
			Lichfield	1	7
	305	19		229	2

GROSS TOTAL:—	Tons	Cwts.
(Belfast) Irish meat	2	6
Scotch meat	305	19
Local meat	229	2
	537	7

SUMMARY.

	Tons.
Four months traffic, on the basis of the traffic for September, which may be taken as an average summer month	2,100
Eight months at 50 per cent. increase upon the summer months	6,300
ANNUAL TOTAL	8,400

2. STATEMENT of Live Stock conveyed to London by the following Railway Companies during the Year ending 30th June 1865.

Company.	Cattle.	Calves.	Sheep.	Pigs.	Total.
Great Eastern	100,364*	—	401,553	40,058	542,475
London and North-western	57,121	4,014	182,383	17,622	261,640
Great Northern	28,311	715	164,103	4,268	197,397
Great Western	11,296	10,496	144,556	1,186	167,534
London and South-western	6,312	3,567	94,435	1,586	105,900
Midland	26,326	609	51,141	561	78,637
London, Chatham, and Dover	15,705	45,728†	—	906	62,339
London and Brighton	1,033	311	9,365	561	11,275
South-eastern	616	212	34,911	982	36,721
Totals	247,589	65,652	1,082,947	67,730	1,463,918

* Including Calves. † Including Sheep.

3. STATEMENT of Cattle Traffic received at and forwarded from the under-mentioned Stations, 12 months ending 31st August 1865.

Stations.	Horses.	Cattle.	Calves.	Pigs.	Sheep.
Dublin:					
Received at					
Forwarded from	865	47,432	60	84,296	69,323
Liverpool:					
Received at	119	12,234	10,141	5,961	195,515
Forwarded from	3,528	66,605	605	107,883	147,964
Manchester:					
Received at	307	58,711	14,813	65,987	242,841
Forwarded from	101	11,269	168	3 660	51,282
Leeds:					
Received at	78	2,968	286	6,754	326
Forwarded from	27	1,371	27	10,138	10,085
Carlisle					
Received at	74	22,403	2,668	1,844	6,627
Forwarded from	232	7,666	82	2,464	46,690
Wolverhampton:					
Received at	1,978	11,246	5,315	53,399	48 732
Forwarded from	22	2,810	150	10,141	12,482
Birmingham:					
Received at	149	16,087	1,965	70,278	70,033
Forwarded from	1,322	1,247	737	8,755	5,433
Shrewsbury:					
Received at	139	4,070	280	7,269	19,572
Forwarded from	220	6,488	205	10,512	15,535
Totals	9,161	272,607	37,592	449,341	942,440

4. STATEMENT showing the Quantity of Cattle received at London and North-western Stations from Scotland, during 12 months ending 31st August 1865.

Station Received at.	Cattle.	
	Fat.	Lean.
Bay Horse	—	291
Birmingham	47	—
Blisworth	—	10
Bletchley	—	10
Carlisle	7,371	3,000
Carnforth	—	28
Chester	71	—
Crewe	—	211
Hartford	—	80
Harrow	—	8
Hereford	—	13
Ingleton	36	36
Kendal	8	—
Kirkby Lonsdale	140	70
Lancaster	550	248
Liverpool	2,737	—
London	5,548	—
Leominster	—	151
Leighton	—	93
Manchester	832	—
Market Harborough	—	16
Milnethorpe	—	69
Oxenholme	12	—
Penrith	375	—
Peterborough	—	60
Preston	2,200	1,107
Parkside	—	21
Shrewsbury	—	122
Stafford	—	107
Stamford	—	101
Tamworth	—	16
Tebay	157	—
Warrington	—	479
Watford	—	2,047
Welford	—	21
Welshpool	—	17
Whitmore	45	—
Whitchurch	—	24
Windermere	8	—
Wigan	122	—
Wolverhampton	10	—
Weedon	8	—
Abergele	—	73
	20,277	8,529

5. STATEMENT of Cattle received at London and North-western Stations from Wales, for 12 months ending 31st August 1865.

Received at	Cattle.	
	Fat.	Lean.
Banbury	35	35
Bletchley	53	120
Birmingham	379	—
Boxmoor	—	109
Chelford	—	32
Chester	800	2,007
Crick	228	1,000
Crewe	400	162
Coventry	—	248
Cambridge	—	84
Congleton	300	56
Derby	22	—
Hanwood	—	575
Hereford	—	124
Huddersfield	128	128
Kendal	—	15
Leicester	772	771
Leighton	—	34
Leominster	—	39
Leamington	73	73
Leeds	68	69
Liverpool	1,500	93
London	1,279	—
Manchester	1,621	—
Market Harborough	—	1,203
Macclesfield	59	59
Northampton	—	1,391
Nuneaton	—	2,679
Peterborough	—	193
Rugby	—	3,711
Rugeley	—	183
Shrewsbury	1,245	1,245
Slaithwaite	271	1,000
Stafford	60	207
Stockport	100	36
Stoke	400	54
Tamworth	50	863
Uttoxeter	100	68
Warrington	60	204
Watford	—	3,604
Weedon	—	318
Welford	—	327
Wellingborough	—	322
Whaley Bridge	—	292
Wigan	103	—
Wolverhampton	797	—
Wolverton	69	69
Yockleton	—	138
	*10,972	23,940

6. STATEMENT showing the Quantity of Cattle booked through, on the North-western Railway, from Irish Ports to places in England, viâ Liverpool and London and North-western route, during 12 months ending 31st August 1865.

To	Cattle.	
	Fat.	Lean.
Leeds	58	58
York	—	903
Darlington	—	17
Hartley	—	46
Cambridge	—	727
Carlisle	—	173
London	1,605	—
Wakefield	10	—
Wolverhampton	102	—
Huntingdon	—	1,257
Manchester	2,645	—
Skipton	—	22
Huddersfield	—	14
Doncaster	—	28
Lincoln	—	137
Leicester	—	49
Brigg	—	24
Buxton	—	18
Bradford	16	—
Preston	31	31
Uttoxeter	34	34
Hartford	—	10
Shrewsbury and Hereford Stations	—	35
Stafford	—	3
Whitmore	10	—
Lancaster	102	—
Marsborough	55	—
	4,488	3,586

7. STATEMENT showing the Quantity of Cattle forwarded from Liverpool, during 12 months ending 31st August 1865.

To	Cattle.	
	Fat.	Lean.
Birmingham	5,140	—
Bescot	840	—
Bolton	380	579
Chester	—	—
Huddersfield	3,834	17
Lancaster	—	—
Leeds	438	—
Leigh	282	153
Leominster	—	—
London	276	167
Longwood	—	98
Mirfields	—	—
Manchester	32,487	109
Market Harborough	—	—
Stockport	16	437
Warrington	—	—
Wigan	670	62
Winsford	—	—
Wolverhampton	3,769	—
Wakefield	2,026	—
Stoke	1,024	—
Derby	1,408	115
Wortley	—	1,132
Huntingdon	—	43
Cambridge	—	106
Northampton	—	72
Preston	—	60
Rockingham	—	189
Weedon	—	252
Stockton	—	16
Sheffield	—	332
Leicester	—	—
Nottingham	178	11
Leamington	—	48
Shrewsbury	—	347
Whitmore	—	12
York	—	5
Hull	—	—
Carlisle	—	—
Hereford	—	42
Hartford	—	120
Nuneaton	—	41
Parkside	—	135
Penrith	—	8
Crewe	—	90
Holywell	—	5
Stafford	—	19
	52,768	4,837

8. STATEMENT showing the Quantity of Cattle booked through and shipped from Dublin viâ Holyhead, and the markets to which they were forwarded, during 12 months ending 31st August 1865.

	Cattle.	
	Fat.	Lean.
Abergele	—	14
Carlisle	875	—
Chester	72	—
Conway	—	2
Carnarvon	16	—
Crewe	5	—
Flint	—	5
Hereford	—	2
Holyhead	—	606
Holywell	11	—
Dewsbury	—	30
Liverpool	2,510	—
Llanfair	20	—
London	8,620	—
Manchester	13,880	—
Market Harborough	—	876
Northampton	—	267
Oldham	—	5
Rhyl	—	8
Rugby	—	7
Stamford	—	185
Stafford	8	—
Watford	—	60
Weedon	—	17
Cambridge	—	84
Denbigh	—	4
Derby	263	—
Wolverhampton	566	—
Huntingdon	—	6,371
Peterborough	—	4,350
Wakefield	20	—
Leicester	—	1,216
Marsborough	3,207	—
Stoke	3,023	—
York	—	114
Leeds	—	38
Halifax	18	—
Doncaster	—	14
Sheffield	34	—
Nottingham	20	—
Macclesfield	23	—
Burslem	653	—
	33,844	14,277

9. Store Cattle Traffic ex Liverpool.

Date.	1864.	1865.	Destination.	
	Numbers.	Numbers.		
Sept. 9	84	44	Peterborough	Irish Cattle.
„ 16	237	20	Do.	
„ 23	374	198	Do.	
„ 30	882	515	Do.	
Oct. 7	261	64	Do.	
„ 14	399	59	Do.	
„ 21	237	103	Do.	
„ 28	882	Nil.	Do.	
Nov. 4	637	Nil.	Do.	
„ 11	617	58	Do.	
„ 18	545	54	Do.	
	5,155	1,115		

4,040 decrease in eleven weeks ending 18th November 1865.

The decrease in same traffic from Ireland viâ Holyhead will be nearly double the above.

In consequence of the disease amongst cattle, dealers are prevented from purchasing in Ireland for English fairs and markets, and there being more than an average crop of grass and roots in that country the graziers are enabled to buy up and feed; we may therefore anticipate a very considerable trade after Christmas, providing the disease moderates and the restrictions are taken off the fairs and markets, otherwise they will be kept in Ireland and fattened for the English markets.

10. Total Cattle Traffic carried upon the London and North-western system for 12 months ending 31st August 1865.

Month.	Horses.	Cattle.	Calves.	Pigs.	Sheep.
1864.					
September	1,754	37,473	2,404	30,042	126,544
October	1,780	57,998	4,135	37,417	120,886
November	1,490	52,576	3,850	40,958	64,860
December	453	28,830	2,630	44,571	63,190
1865.					
January	617	22,632	2,793	43,799	82,037
February	822	20,494	3,812	37,473	76,686
March	841	25,847	11,111	41,536	84,152
April	942	40,471	18,445	37,901	91,155
May	1,801	44,155	13,308	37,510	113,587
June	2,502	27,144	4,571	27,499	140,571
July	1,842	18,617	2,983	19,816	157,382
August	1,496	28,756	2,081	25,307	169,418
	16,340	404,993	72,523	423,829	1,290,468

11. STATEMENT showing the Quantity of Store Cattle forwarded from Dublin, viâ Holyhead, to Huntingdon and Peterboro', from the 1st September to 25th November 1865, as compared with the corresponding period in 1864.

From	To	1864.	1865.	Decrease.
Dublin	Huntingdon	1,141	123	1,018
Do.	Peterboro'	3,296	1,075	2,221
Dublin and Meath Stations	Do.	231	—	231
Do.	Huntingdon	997	62	935
Dublin and Drogheda Stations	Do.	2,361	—	2,361
Do.	Peterboro'	176	—	176
		8,202	1,260	6,942

MR. CAWKWELL to the SECRETARY.

London,
6th December, 1865.

SIR,

SUPPLEMENTARY to the statements handed in by me a few days ago, I now beg to send a comparative return of the store cattle forwarded from Dublin, viâ Holyhead, to Huntingdon and Peterboro' (the two great receiving places for cattle for the eastern counties grazing district), from the 1st September to the 25th November, 1864 and 1865, showing a falling off this year of 6,942 head, upon a gross number of 8,202 for 1864.

This comparison will be found to bear out my representations, that the English dealers and farmers were averse to introducing fresh or strange beasts at present into their stocks, and that the store cattle was now being kept and fatted in Ireland, instead of being sent as usual to England.

Yours truly,
W. CAWKWELL.

The Secretary to the Commissioners on the Cattle Plague, &c. &c.

APPENDIX E.

RETURNS furnished by EDWARD BALLARD, Esq., M.D., Medical Officer of Health, Islington.

Requirements of the Medical Officer of Health for Cow-sheds about to be licensed in Islington.

The cow-sheds are visited, as a rule, at short intervals during the year by the inspectors of nuisances, and annually before the day of licensing by the Medical Officer of Health. Unless the following requirements are complied with the licence is opposed by the vestry.

1. A minimum cubical space of 500 feet must be allotted to each cow. [I do not regard this as sufficient space, since cowkeepers as a rule object to any thing like a good ventilation. I have been overruled however in this matter by the Sanitary Committee. At my representation the licensing magistrates have given notice that next year they intend requiring 1,000 feet per cow to be provided. In calculating the space per cow, I take, not the number of cows existent in the shed, but the number for which there is standing room. Even the minimum of 500 feet has not been enforced hitherto by the licensing magistrates in the instance of old sheds.]

2. At least three feet in width of superficial space must be provided for each cow.

3. Provision must be made for a proper ventilation.

4. The gutter at the tail of the cows must be laid either with asphalte—the best paving of all—or with good or glazed bricks on edge; in either case upon a bottom of four inches of well-laid concrete, and be properly sloped to a trapped gully communicating by a sufficient drain with the sewer.

5. There must be a brick dung pit cemented within and covered, and provided with a proper drain—outside the shed where practicable.

6. There must be a grains-pit of brick cemented within, covered and properly drained into the sewer.

7. There must be an ample supply of water. For new sheds New River water must be laid on, and in all cases the supply to the attached dairy must be from this source.

8. Each year prior to licensing, the sheds must be thoroughly lime whited.

9. The yard attached to the shed must be properly paved and drained.

10. The licensing of any new shed is absolutely opposed when established in a crowded or poor locality, or too near to inhabited houses. Any *old* shed is opposed where during the past year there have been any serious complaints of nuisances arising from it, or when a proper amount of cleanliness has not been observed.

EDWARD BALLARD, M.D.,
Dec. 7, 1865. Medical Officer of Health.

RETURNS showing PROGRESS of DISEASE, CONDITIONS of SHEDS, &c., in ISLINGTON.

Infected Sheds up to November 30, 1865, in order of Attack, as nearly as can be ascertained.	Habitual Cleanliness, &c.	Number of Cows usually kept.	Cubical capacity of Shed.	Cubic Feet per Cow.	Water Supply	Dung Pit within Shed?	Number of Cases of Cattle Plague to November 30.	Died or slaughtered on account of Cattle Plague.	Number of Cows on November 30 in Shed.	Number ill with Cattle Plague, on November 30.	Brought in since Infection of Shed.	Cases among Cows newly brought into infected Sheds.	REMARKS.
July to September:—			Ft.										
Nicholls, Liverpool Road	Good	120	75000÷80=	937	Well in shd	0	11	116	13	—	13	0	Shed newly paved, limewhited, and disinfected, and drainage altered before new cows brought in; large shed was emptied.
Dennison, Swan Yard, Upper Street	Good, new.	20	7000÷12= 683 3360÷ 7= 480		N.R.	0	20	20	7	—	7	0	Shed previously thoroughly disinfected with chloride of lime, and limewhiting, and Condy's fluid; shed all along had 1 cow in it which did not have disease.
Wingrove, Edwin, Upper Queen Street	Good	14	3767	269	Well in yrd	+	8	8	Empty	—	—	—	
Liddiard, Hale Street	Bad	16	14700	918	Well in shd	+	20	20	Empty	—	4	4	Lost his licence, having converted his shed into stables.
Thurtle and Harvey, Duncan Street	Good	400	158508÷200=	792	N.R.	+	200	168	74	1	Yes	Many	Has been buying in ever since commencement of disease; commenced in new shed of which measurement is given; did not disinfect properly, and fodder was stored in infected shed.
Wingrove, Frederick, Elmore Street	Good new.	43	14229	330	Well in yrd	0	43	42	1	—	—	—	
Law, Hornsey Road	Good	15	11662	777	N.R.	0	5	3	9	—	4	0	Has never been empty; has used disinfectants.
Pym, St. Paul Street	„	13	3696÷8= 462 3360÷7= 480		Well in yrd	0	11	11	3	—	Yes	0	Occupy same yard in a mews; limewhited after the disease, and emptied shed.
Peckett and Lowther, St. Paul Street	„	7	3360÷7 = 480		„	0	7	7	1	—	Yes	0	
Pugh, Bride Street	„	8	2100	262	N.R.	+	5	5	Empty	—	—	—	
Garland and Hoyte, Prospect Place	Bad	5	About 8000	1600	„	0	6	5	13	—	12	0	Shed limewhited, and has used Condy's fluid, and has used Stockholm tar; shed never quite emptied.
Panter, Sutterloy Place and Mews	Good	11	3600÷6= 600 2400÷5= 480		„	0	10	10	8	—	8	1	Limewhited and disinfected, but was never empty.
Mills, Roman Road	„	50	40420	808	„	0	34	24	19	—	Yes	0	Never quite empty; disinfected well, and limewhited.
French, Barnsbury Grove	„	16	6006÷12=	500	„	0	20	12	9	3	Yes	6	Never quite empty; used abundance of chloride of lime.
Cook, Maiden Lane (Fields)	Good, old	22	4687	213	Well in yrd	0	22	22	Empty	—	—	—	
Mosey, Thornhill Road	Bad	20	13440	672	N.R.	+	19	17	7	—	Yes	Yes	Never quite empty; disinfected with chloride of lime, and limewhited.
Warrington, Gifford Street	Good	8	3780	472	„	0	6	6	Empty	—	—	—	
Jennings, New Wharf Road, King's Cross.	Bad	7	6624	946	„	+	4	4	5	—	Yes	0	Emptied thoroughly; limewhited imperfectly.
Castle, Hemingford Road	„	4	3168	732	„	+	2	2	Empty	—	—	—	
Brooke, Roman Road	Good	7	3120	480	„	0	7	4	3	—	—	—	
Huckett, Strahan Place, Ball's Pond	„	11	8550	777	„	0	11	11	1	—	1	0	Shed thoroughly disinfected before new cow brought in, and emptied shed completely.
Grant, Strahan Place, Ball's Pond	„	6	2520	420	„	0	6	6	Empty	—	—	—	
Ottley, Prospect Place, Ball's Pond	Bad	5	1892	374	„	0	5	1	Empty	—	—	—	
Rance, Northampton Mews	Good	9	4950	550	„	0	9	6	Empty	—	—	—	
„ New North Road	„	24	6056	252	„	0	21	21	5	—	5	0	Shed thoroughly disinfected after all cows were gone, and before new cows brought in, and emptied shed.
King, Upper Holloway	„	18	10240	568	„	0	14	11	2	—	—	—	
Arnold, Andover Road	Good, new.	4	4797	1199	„	0	4	2	2	—	—	—	Had plague in August; previously had lung disease.
Stainton, Hamilton Place	Good	14	Open shed	—	—	—	10	8	Empty	—	—	—	The cows were in field when attacked.
Dennison, Canonbury Road	„	5	6140	528	N.R.	0	1	1	Empty	—	—	—	
Johnson, College Street, Highbury Vale	„	6	9240	1540	„	+	6	6	2	—	2	0	New cows bought from Marshall, who had them fresh from the country; emptied shed, having previously limewhited and disinfected.

Returns showing Progress of Disease, Condition of Sheds, &c., in Islington—*continued.*

Infected Sheds up to November 30, 1865, in order of Attack, as nearly as can be ascertained.	Habitual Cleanliness, &c.	Number of Cows usually kept.	Cubical capacity of Shed.	Cubic Feet per Cow.	Water Supply.	Dung Pit within Shed?	Number of Cases of Cattle Plague to November 30.	Died or Slaughtered on account of Cattle Plague.	Number of Cows on November 30 in Shed.	Number ill with Cattle Plague on November 30.	Brought in since Infection of Shed.	Cows among newly brought into infected Shed.	Remarks.
July to September (*continued*):—			Ft.										
Jury, Caledonian Road	Good	14	5800	414	N. R.	0	1	1	1	—	3	0	Sent 12 to Metropolitan Cattle Market before disease, and 1 subsequently; brought in from Cattle Market afterwards, on return if they did not turn out well; emptied and disinfected.
Charlton, Caledonian Road	Bad	5	7424	1484	„	0	1	1	Empty	—	—	—	Has not applied for a new licence.
Gibson or Crofts, Hollingsworth Street	Good	10	4725	472	„	0	2	2	3	—	3	0	Shed limewhited and disinfected previously to introducing new cows; emptied thoroughly.
Cattermole (?)	„	6	3240	540	„	0	1	1	5	—	—	—	
October:—													
Clayton, Bemerton Street	Good	6	3060	510	N. R.	+	3	3	2	—	—	—	
Tilston, Wells Yard	„	41	8190÷22= 2392÷ 6= 3380÷ 8= 1440÷ 5=	372 398 422 288	„	0	9	6	2	—	—	—	Sent 33 cows to slaughter-house on outbreak; a series of 4 sheds, partly open on the 3 sides of a yard.
Humphries, George Street, Caledonian Road.	Bad	5	2740	548	„	0	2	—	3	—	—	—	
Preston, Porter's Mews, Holloway Road	Good	4	2430	607	„	0	2	—	Empty	—	—	—	Sold all off.
Young, Highgate Hill	„	7	3342	543	Well in yrd	0	6	6	„	—	—	—	
Webb, Chapel Place	Bad	5	4502	918	N. R.	+	4	4	„	—	—	—	
Clarke, Rutland Terrace	Good	6	2688	448	„	0	1	1	„	—	—	—	
Dudman, Durham Road	„	11	4620	420	„	0	3	3	„	—	—	—	
November:—													
Ragg, Hanley Road	„	19	3536	452	„	0	1	—	1	—	—	—	Said to have sold off his cows for slaughter from fear; certainly some diseased.
Vicary, Bolingbroke Terrace	„	18	4200÷8 = 6912÷15=	525 460	Well in shd	0	1	—	7	—	—	—	Slaughtered 14 cows from fear of disease on first case happening.
Rogers, Hornsey Rise	„	13	12000÷17=	705	N. R.	0	3	2	7	1	—	—	Sold 4 healthy cows at the market for fear; free opening to roof through hay loft; usually has 4 horses in shed.
Gotton, Camden Road	„	30	12378	429	„	0	1	1	Empty	—	—	—	Removed cows to Finchley early in epidemic; the one case he brought from Finchley, subsequently.
Cook, Hornsey Road	Bad	7	3872	553	„	0	1	1	„	—	—	—	
Sheds unaffected up to November 30.													
Smith and Jordan, James Street, St. Peter Street.	„	13	15120	1163	„	0	—	—	12	—	—	—	
Wellford, Upper Holloway	Good	22	Mostly open	—	„	+	—	—	Empty	—	—	—	Removed his cows to Sudbury early in epidemic.
Benjafield, Junction Road	„	10	7440	744	„	0	—	—	2	—	—	—	
Cheesley, Bingfield Street, Caledonian Road.	„	10	3213	321	„	+	—	—	3	—	—	—	
Dunnethorne (late Wells), South Street	„	3	7936	2652	„	0	—	—	2	—	—	—	
King, Hemingford Road	„	9	8910	990	„	0	—	—	10	—	—	—	
Haward, Matilda Street	„	18	6490÷14= 3222÷ 6=	457 537	„	0	—	—	13	—	—	—	
Pye, Copenhagen Street	„	3	2800	933	„	0	—	—	3	—	—	—	
Sargent, Bryant Mews	„	3	2060	686	„	0	—	—	3	—	—	—	
Maynard (?), Gifford Street	Bad	18	12502	694	„	0	—	—	Empty	—	—	—	Lost his licence, having converted his shed into stables.
Davies, St. Peter Street, Kendall's Mews.	„	5	—	—	Well in yrd	0	—	—	3	—	—	—	
Samson, South Street	Good	2	2944	1472	N. R.	0	—	—	2	—	—	—	
Fleet, Northampton Street	Bad	5	6560	1312	„	0	—	—	5	—	—	—	
Stratton Orchard Street	Good	6	4050	675	„	0	—	—	5	—	—	—	
Tilston (?), Holloway Road	„	16	2520÷8 = 3380÷8 =	315 423	„	0	—	—	8	—	—	—	
Goodall (?), Queen's Road	Bad	5	2002	400	„	0	—	—	Empty	—	—	—	Sold all his cows off.
Morteboy, Archway Place	Good	12	5120	426	„	0	—	—	10	—	—	—	
Downes, Upper Cottenham Road	„	5	2925÷8 =	365	„	0	—	—	7	—	—	—	
Kirkland, Andover Road	„	6	2940	490	„	0	—	—	4	—	—	—	
Marshall, Highbury Vale	Good, new.	3	Open	—	„	0	—	—	Empty	—	—	—	
Frost, Highbury Vale	Good	8	8100	1012	„	0	—	—	7	—	—	—	

Addenda to Return.

A.

Showing the relation borne by the Size of the Establishments to the Outbreaks of the Disease.

Of 35 establishments containing less than 10 cows, 22 were attacked, or 62·8 per cent.

Of 22 establishments containing 10 to 20 cows, 15 were attacked, or 68·1 per cent.

Of 6 establishments containing 20 to 40 cows, 5 were attacked, or 83·3 per cent.

Of 5 establishments containing 40 to 400 cows, 5 were attacked, or 100·0 per cent.

The liability appears to increase with the number of cows kept. This is in favour of the view that attributes the origin to contagion, since large cowkeepers buy in new cows more frequently than persons in a smaller way of business and are thus more likely to introduce disease into their sheds.

B.

Showing the relation borne by the general Cleanliness or Dirtiness of the Sheds to the Outbreaks.

Of 53 establishments habitually clean and tidy 37 were attacked, or 69·8 per cent.

Of 14 establishments habitually dirty and slovenly 10 were attacked, or 71·4 per cent.

The difference is not sufficient to establish any connection between mere dirtiness and the occurrence of the outbreaks. The dirtiness usually consists in negligence in sweeping up the fresh evacuations and in sufficiently frequent limewhiting of the walls.

C.

Showing the relation between crowding in the Sheds and the Outbreaks of the Disease.

Of 44 sheds affording 200 to 600 cubic feet of space per cow, 35 were attacked, or 79·5 per cent.

Of 20 sheds affording 600 to 1,000 cubic feet of space per cow, 14 were attacked, or 70·0 per cent.

Of 9 sheds affording 1,000 and upwards cubic feet of space per cow, 4 were attacked, or 44·4 per cent.

This statement is in favour of crowding as promoting the outbreak of disease.

D.

Showing the relation between Crowding and the Outbreak of the Disease in large and small Establishments respectively.

Establishments—

Containing less than 10 cows:

Of 17 sheds affording 200 to 600 cubic feet per cow, 14 were attacked, or 82·3 per cent.

Of 8 sheds affording 600 to 1,000 cubic feet per cow, 4 were attacked, or 50·0 per cent.

Of 8 sheds affording 1,000 and upwards cubic feet per cow, 4 were attacked, or 50·0 per cent.

Of 1 open shed none were attacked.

Containing 10 to 20 cows:

Of 18 sheds affording 200 to 600 cubic feet per cow, 12 were attacked, or 66·6 per cent.

Of 7 sheds affording 600 to 1,000 cubic feet per cow, 5 were attacked, or 71·4 per cent.

Of 1 shed affording 1,000 and upwards cubic feet per cow, none were attacked.

Containing 20 to 40 cows:

Of 4 sheds affording 200 to 600 cubic feet per cow, 4 were attacked, or 100·0 per cent.

Of 2 sheds affording 600 to 1,000 cubic feet per cow, 2 were attacked, or 100·0 per cent.

Containing 40 cows and upwards:

Of 5 sheds affording 200 to 600 cubic feet per cow, 5 were attacked, or 100·0 per cent.

Of 3 sheds affording 600 to 1,000 cubic feet per cow, 3 were attacked, or 100·0 per cent.

The influence of crowding is only perceived distinctly in the smallest establishments. In the larger establishments other causes may have operated more forcibly.

E.

Showing the relation between the Sources of Water Supply and Outbreaks of the Disease.

Establishments—

Supplied from superficial wells upon the premises:
10, of which 9 were attacked, or 90 per cent.

Supplied by New River Company:
57, of which 37 were attacked, or 64·9 per cent.

The disproportion here is sufficient to lead to the belief that some influence was exerted by the greater impurity of the well water.

F.

Showing the Influence of Well Water in large and small Establishments respectively.

Establishments—

Containing less than 10 cows:

Of 3 supplied with well water 2 were attacked, or 66·6 per cent.

Of 32 supplied with New River water 20 were attacked, or 62·5 per cent.

Containing 10 to 20 cows:

Of 4 supplied with well water 4 were attacked, or 100·0 per cent.

Of 17 supplied with New River water 10 were attacked, or 58·8 per cent.

Containing 20 to 40 cows:

Of 1 supplied with well water 1 was attacked, or 100·0 per cent.

Of 5 supplied with New River water 4 were attacked, or 80·0 per cent.

Containing 40 cows and upwards:

Of 2 supplied with well water 2 were attacked, or 100·0 per cent.

Of 3 supplied with New River water 3 were attacked, or 100·0 per cent.

The influence is most marked in the establishments of medium size; little marked in the smallest establishments where the chances of any one cow suffering from this cause are less; and not obvious at all in the largest sheds where some other causes, such as liability to infection, predominate.

G.

Showing the relation between the Mode of storing the Dung and Outbreaks of the Disease.

Of 11 establishments (retaining their cows) where dung was stored within shed 10 were attacked, or 90·9 per cent.

Of 56 establishments (retaining their cows) where dung was not stored within shed 37 were attacked, or 66·0 per cent.

H.

Showing the Influence of storing Dung within the Sheds in large and small Establishments respectively.

Establishments—

Containing less than 10 cows:

Of 6 which stored the dung within sheds 6 were attacked, or 100·0 per cent.

Of 30 which did not thus store it 16 were attacked, or 53·3 per cent,

Containing 10 to 20 cows:

Of 3 which stored the dung within shed 2 were attacked, or 66·6 per cent.

Of 17 which did not thus store it 12 were attacked, or 70·5 per cent.

Containing 20 to 40 cows:

Of 2 which stored the dung within shed 1 was attacked, or 50·0 per cent.

Of 4 which did not thus store it 4 were attacked, or 100·0 per cent.

Containing 40 cows and upwards:

Of 1 which stored the dung within shed 1 was attacked, or 100·0 per cent.

Of 4 which did not thus store it 4 were attacked, or 100·0 per cent.

The influence is only perceived in the smallest establishments, but there it is distinctly. In larger establishments other influences predominate. The reason appears to be that in the smallest establishments the dung is retained longer and undergoes more fermentation, since it is not worth the while of a contractor to remove it until a sufficient load has collected. This is a practical difficulty which I have frequently had to contend with, and it will not be overcome until local authorities themselves are required to contract for the removal of dung in their several districts, such dung being regarded as their property just as dust and house refuse are at the present time. There is a permissive clause in the amended Metropolis Local Management Act, enabling vestries and district boards to contract for removal of dung, "with the consent of the owner;" but this proviso renders the clause inoperative, not because the majority of those persons who only keep a few cows, or one or two horses, would not willingly give their consent, but because of the uncertainty of a general consent being given, and the consequent difficulty the local authorities feel of entering into any contract at all.

I.

Showing the Influence of storing Dung in Sheds of different Degrees of Crowding.

Of 4 sheds storing dung within them, and affording 200 to 600 cubic feet per cow, 3 were attacked, or 75·0 per cent.

Of 35 sheds not thus storing it, and affording 200 to 600 cubic feet per cow, 27 were attacked, or 77·1 per cent.

Of 6 sheds storing dung within them and affording 600 to 1,000 cubic feet per cow, 6 were attacked, or 100·0 per cent.

Of 14 sheds not thus storing it, and affording 600 to 1,000 cubic feet per cow, 8 were attacked, or 57·1 per cent.

Of 1 shed storing dung within it, and affording 1,000 and upwards cubic feet per cow, 1 was attacked, or 100·0 per cent.

Of 9 sheds not thus storing it, and affording 1,000 and upwards cubic feet per cow, 4 were attacked, or 44·4 per cent.

This influence is only made evident in respect of sheds affording 600 cubic feet and upwards per cow. In the most crowded sheds other influences predominate.

K.

Showing the Influence of storing Dung in the Sheds of varying Capacity.

Of 5 sheds storing dung within them, and of total capacity less than 4,000 cubic feet, 4 were attacked, or 80·0 per cent.

Of 25 sheds not thus storing it, and of total capacity less than 4,000 cubic feet, 16 were attacked, or 64·0 per cent.

Of 2 sheds storing dung within them, and of total capacity of 4,000 to 8,000 cubic feet, 2 were attacked, or 100·0 per cent.

Of 19 sheds not thus storing it, and of total capacity of 4,000 to 8,000 cubic feet, 13 were attacked, or 68·4 per cent.

Of 4 sheds storing dung within them, and of total capacity of 8,000 and upwards cubic feet, 4 were attacked, or 100·0 per cent.

Of 14 sheds not thus storing it, and of total capacity of 8,000 and upwards cubic feet, 10 were attacked, or 71·4 per cent.

This influence is thus demonstrable in sheds of all the above degrees of capacity.

SUMMARY.

1. The Cattle Plague in Islington has attacked the larger establishments in preference to the smaller.

2. There is no evidence of the origin of the disease in mere want of cleanliness.

3. The crowding of cows within sheds appears to have favoured the outbreak of the disease in some instances.

4. Those establishments which supplied their cows with water from superficial wells suffered more than those which supplied them with water furnished by the New River Company.

5. The emanations from fermenting dung stored within the shed appear in certain instances to have favoured the outbreak of the disease. The general capaciousness of the shed, or the reverse, appear to have exercised no remarkable influences over the general result of this infringement of a sanitary law, but the influence of crowding of the cows seems to have predominated over it where the crowding was excessive.

6. The smallest establishments, from the less liability to any introduction of *contagion*, exhibit more distinctly than larger establishments the baneful predisposing influences of crowding and the emanations from retained and fermenting dung stored within the sheds. The influence of a supply of water derived from superficial wells is most obvious in the establishments of medium size.

In the largest establishments the influence of all these predisposing causes seems to have been over-ridden by some more important and immediate cause, such as would be the very much greater liability to the introduction of the specific poison from without.

EDWARD BALLARD, M.D.
Medical Officer of Health for Islington.

Dec. 15, 1865.

STATEMENT of beasts received for destruction at the three principal Boiling Establishments at Belle Isle in months July to November inclusive.

—	July.		Aug.		Sept.		Oct.		Nov.		Total.	
	Alive.	Dead.	Alive.	Dead.	Alive.	Dead.	Alive.	Dead.	Alive.	Dead.	Alive.	Dead.
Moggeridge -	–	1	–	52	–	20	–	17	–	–	–	90
Shonach - -	–	13	12	89	2	54	–	32	–	10	14	198
Atchelor - -	–	36	23	133	–	95	–	64	–	10	23	338
	–	50	35	274	2	169	–	113	–	20	37	626

Of the beasts brought in dead, there were only 3 bulls, 2 heifers, and 4 calves. All the rest, dead and alive, were cows.

From Low's lairs at Belle Isle, where cattle stand prior to market, there were received at boilers

In July - 8
„ Aug. - 64
„ Sept. - 21
„ Oct. - 16
„ Nov. - 4

} Total 113. All cows on their way for sale in market or returning therefrom.

Of the 611 cows which died or were slaughtered on account of the Plague in Islington, only 77 at the utmost were received at the most convenient place for destruction, viz. Belle Isle; viz.—

In July - 0
„ Aug. - 38
„ Sept. - 33
„ Oct. - 6
„ Nov. - 0

} out of 547.
„ 64.

EDWARD BALLARD, M.D.
Medical Officer of Health.

Dec. 7, 1865.

APPENDIX F.

STATEMENT of Precautions adopted in the Parish of St. Luke's, Chelsea, and of Results.*

The Vestry of the Parish of St. Luke, Chelsea,
Vestry Hall, King's Road, S.W.
2d December 1865.

SIR,

YOUR letter of the 25th ultimo, addressed to our inspector of nuisances, has been laid before the vestry, and I have been directed to reply to it. Should you at any future time require information from this parish, time will be saved by addressing your inquiry to me in the first instance.

The cowsheds have been visited by the medical officer of health and inspector of nuisances, and the cowkeepers warned of the extremely infectious nature of the disease.

A regular enumeration of the cows was made, and reported from week to week to ascertain whether any increase or decrease of stock had taken place.

The circumstances connected with any change were carefully inquired into, whence they came, where they went, what price they fetched, so that the first trace of disease was easily discovered.

The cowkeepers were already under the control of the officers of the vestry, to a certain extent, by the licence system.

They had bound themselves by agreement, a copy of which I enclose, to attend to limewashing, ventilation, removal of dung, washing down, &c. The inspector of nuisances was directed to watch that the agreement was strictly carried out. He was instructed to advise all cowkeepers to use special disinfectants, Condy's fluid, chloride of lime, &c., before disease appeared; also to advise them not to mix any fresh cattle with their stock, but to place them in some separate shed or stable for a fortnight or three weeks; to let no one who had come in contact with strange cattle visit the cowsheds, but to keep a man specially to attend on any new cows in their separate building.

The government inspector was necessarily excluded on this system until after disease appeared. When the inspector of nuisances was engaged in aiding persons who had the disease in their sheds he ceased to visit the other sheds for a time.

When disease appeared all the healthy cattle were sold at once for immediate slaughter. The sick were treated in various ways, but mostly died or were sold to the knacker. The manure was mixed with chloride of lime before it was allowed to be removed; the sheds were fresh limewashed, and as soon as the sick were dead or recovered were pitched, or covered over with gas tar, and again limewashed.

In several instances sheds have been emptied from false alarm. The government inspector has occasionally condemned animals as diseased which have been proved afterwards not to have been so. In several instances one cow only being ill in the shed, and the disease not spreading, the medical officer of health is of opinion that it was wrongly suspected to be Cattle Plague. In Chelsea there is no proof that it ever was conveyed from one shed to another in any other way but by the introduction of fresh cattle, except in one single instance where the means of infection were not traced.

The whole result has been that the disease has been proved to have been brought into the parish twice by infected cows, and once in a manner not quite determined, and that in one case only was it conveyed to a shed at a short distance. In all probability the sheds would not have become infected if in the two cases mentioned the medical officer of health and inspector of nuisances had been aware of the circumstances, and proper precautions taken. Further, it is not proved in the opinion of the medical officer of health that in any other case a shed did become infected with the Cattle Plague.

The inspector of nuisances wishes to draw the attention of the Commissioners to the preventive treatment which was used in a shed where a cow was condemned as diseased, and no other attack occurred, and also to the careless mode in which the slaughtered animals are removed in the advanced stage of the disorder.

He says, "We have found great benefit from the following: ½ pint of the best whiskey and 1 oz. of sweet spirits "of nitre mixed with arrow-root gruel, one quart to be "given to each cow."

"A most dangerous practice, and one sure to spread "the disease, is that the cows slaughtered at the worst "and last stage of the disease are taken to Trinity Square, "E.C., to be boiled down, all the way from Chelsea, S.W.; "they profess to plug them, but that is impossible, for "from the shaking of the cart there is sure to be some of "the mucus from the head and hinder part to drain on to "the public way; they also pretend to disinfect, and this "is done without opening the cow at all, by merely throwing disinfectants over the body outwardly. If this is to "be continued there should be proper covered carts with "india-rubber joints and hinges, air and water tight."

I beg to send you copy of a tabular statement prepared for another purpose, which perhaps may be of service.†

I am, Sir,
Your obedient servant,
CHAS. LAHEE,
Vestry Clerk.

M. Bernard, Esq.,
Secretary, Cattle Plague Commission,
House of Commons,
(Principal Floor, Room 10),
Westminster, S.W.

Parish of CHELSEA in the County of Middlesex.

Metropolis Local Management Acts Amendment Act,
25 & 26 Vict. cap. 102. sec. 93.

Notice of Intention to apply for a Licence to a Cowhouse.

To the vestry of the parish of Chelsea.

I (A)
residing at
hereby give you notice, that it is my intention to apply for a licence from the ensuing Kensington Divisional Sessions of the Peace to use as a cowhouse the premises (B)
and I undertake, in case the said licence is granted, that the said cowhouse shall be thoroughly cleansed twice a day. That all manure and refuse shall be carefully swept up twice a day, and removed from the premises between the hours of 10 p.m. and 8 a.m. That the grain bins and other places for food or wash shall be kept in good repair, clean, and well covered. That no pigs shall be kept except in a suitable pigstye, which shall be constructed in such manner as the vestry approve. That the cowhouse and all buildings connected therewith shall be limewashed throughout their whole interior at least twice in every year, namely, during March and September.

Dated this day of 18 .

Signature_____.

(A) Here insert name and occupation.

(B) Describe the situation of the premises to be used as a cowhouse.

N.B.—The vestry will require that between every window, doorway, or other opening of the premises to be used as a cowhouse and every inhabited house there intervene sufficient space for free ventilation, and that no underground kitchen or cellar be so used. That the cowhouse be properly lighted and ventilated. That it be provided with a sufficient supply of water and with the necessary apparatus. That it be provided with properly constructed impermeable flooring and drainage communicating directly with the main sewer, and that the inlet to the drain be properly trapped and covered with a fixed grating, the bars of which shall not be more than three eighths of an inch apart, and that a sufficient number of covered receptacles be kept to contain all grain, food, and wash, and that these be kept clean and in good order.

* It having been stated that this parish had been remarkably free from the disease, inquiries were made which produced the above statement.

† See next page.

Name of Cowkeeper and Locality of Cowsheds.	Number of Cows usually kept upon his (*or* her) Premises.	Number sold or otherwise disposed of since the Outbreak of the Cattle Plague in this Country.	Condition when sold or otherwise disposed of.	Number remaining of the original Stock.	Cases of Disease since the Outbreak of the Plague in this Country, and other Particulars.
Mr. Lee, 27, Manor Street -	66	17 sold at market at intervals. 49 sold at market at intervals on account of the Cattle Plague appearing in the neighbourhood.	Fat	—	No disease on the premises.
Mr. Williams, Church Street -	45	3 sold at market - -	Fat	42	3 fresh calved cows brought in. No disease on the premises.
Mrs. Williams, Beaufort Street	45	9 sold at market - -	Fat	36	6 fresh calved cows brought in. No disease on the premises.
Mr. Freeman, Britten Terrace -	12	1 sold to a butcher -	Fat	11	No disease on the premises.
Mr. Collie, Upper Cheyne Row	10	2 sold at market - -	Fat	8	No disease on the premises.
Mr. Osmint, Cook's Ground -	13	——	—	13	No disease on the premises.
Mr. Morrison, Paradise Walk -	80	31 sold at market at intervals.	Fat	49	16 fresh calved cows brought in. No disease on premises.
Mr. Cæsar, Queen's Road West	8	——	—	8	No disease on premises.
Mr. Vickers, George Street -	46	11 sold at market and to Mr. Garland, butcher.	Fat	35	6 fresh calved cows brought in. No disease on premises.
Mr. Smith (late Coton), George Street.	10	4 removed to his shed in St. George's parish.	—	6	4 fresh calved cows brought in. No disease on premises.
Mr. Bunker, Little Cadogan Place.	7	1 sold - - -	Fat	6	No disease on premises.
Mrs. Walters, New Road, Sloane Street.	12	4 sold at market at intervals.	Fat	8	No disease on premises.
Mrs. Tunbridge, New Road -	18	15 sold at market at intervals.	Fat	3	No disease on premises.
Mr. Warne, Little Exeter Street	6	2 sold at market - -	Fat	4	No disease.
Mr. Willcox, Little Exeter Street.	18	13 sold at market -	Fat	5	No disease.
Mr. Dancocks, Fulham Road -	50	33 sold at market at intervals.	Fat	17	No disease.
Mr. Cross, Little Blenheim Street, and College Place.	60	19 sold at market at intervals.	Fat	31	No disease.
Mr. Freshwater, Keppel Street	3	——	—	3	No disease.
Mr. Hornsby, Francis Street -	4	1 sold at market - -	Fat	3	No disease.
Mr. Carnaby, Kensal Road -	4	——	—	4	No disease.
Mr. Wray, Marlborough Road	10	3 sold at market, and 7 sold at market in consequence of the disease appearing in the neighbourhood.	Fat	—	No disease on the premises.
Mr. Smith, Turks Row	8	1 sold previous to the disease appearing.	Fat	1 recovered from the disease, and now healthy.	6 cows died of the Plague, the introduction of fresh cows having given rise to the malady.
Mr. Robinson, Smith Street, Marlborough Road.	7	7 sold to a butcher -	Fat	None	2 fresh calved cows brought in. No disease.
Mr. Strutton, Smith Street, Marlborough Road.	50	50 sold by auction, a railway requiring the shed.	—	Shed empty	4 fresh calved cows brought in, and these 4 died of the Plague.
Mr. Humphrys, Princes Street	38	11 sold at market at intervals. 27 sold at market on account of the disease appearing in the neighbouring shed belonging to Mr. Strutton.	Fat	—	No disease on the premises.
Mr. Argeant, Richards Place -	20	17 sold at market on account of the disease appearing at Strutton's.	—	1	2 died of the Plague.
Mr. Cutler, Marlborough Road	48	18 sold at market - 29 sent to market on account of the disease at Strutton's shed, which stands adjoining.	Fat	—	1 cow slaughtered and sent to the knacker's.
Mr. Walker - - -	41	7 sold at market - -	Fat	—	1 cow slaughtered, on the
Lower North Street (next Exeter Street).		32 sent to market by a health order from the government inspector on account of the disease having appeared in the adjoining shed.			government inspector pronouncing it ill of the Plague.
Lower North Street (next Elizabeth Street).					1 ditto ditto.
					10 fresh calved cows brought in, and all healthy up to this date.
Mr. Strutton, Leader Street -	6	6 sold (all) on account of the disease appearing at Strutton's other shed, Smith Street, Marlborough Road.	—	Shed empty	——
31 premises on which cows are kept.	745	430	211 fatted beasts.		

The whole of the sheds in the parish of Chelsea are limewashed three times during the year, at stated periods; they are well ventilated, furnished with a plentiful supply of good water, and thoroughly washed down twice in the course of each day. No accumulation is suffered to remain upon the premises, which are visited every day by the inspector of nuisances.

The disease has not been at all prevalent in the parish, and during the past fortnight there has not been a single instance of it.

The cows, for the most part, are fed upon the best meadow hay, upland grass, grains, swedes, mangel-wurzel, bran, pollard, bean-meal, pea-meal, wheaten-flour, barley-meal, linseed and oil cake, &c.

15th November 1865.

APPENDIX G.

COMMUNICATION from H. LETHEBY, Esq., M.D., Medical Officer of Health for the City of London, on (1.) SLAUGHTERHOUSES in the CITY; (2.) DISEASED MEAT sent to CITY MARKETS.

London, Sewers' Office, Guildhall.

DEAR SIR, December 12th, 1865.

I REGRET that I was not able to attend at the meeting of the Commissioners last week, and as I may not be able to appear before them, as they have requested, I send you a copy of a late report of mine to the Commissioners of Sewers on the subject of the city slaughter-houses. You will perceive that in my opinion all these slaughter-houses in the city are a public nuisance, and that it would be a public advantage, in a sanitary point of view, if these slaughter-houses were removed to more convenient localities. This report has been considered by the Commissioners of Sewers, and they have resolved to memorialize the Secretary of State on the subject, and to say that, in their opinion, all slaughter-houses in crowded localities should be abolished. They are also of opinion that compensation should be given to those who would be injured by such a measure.

And as regards the other questions which the Commissioners desired me to express my opinion of, namely, the amount and condition of the diseased meat sent to the city markets, perhaps my tabular statement, which is published in the first report of the Commission, will be sufficient for the purposes of the Commissioners. I may add, however, that an enormously large amount of meat from animals affected with the Cattle Plague is now sent to the city markets, and I am afraid that such a proceeding is not only improper, on account of the possible injury to those who may partake of such meat, but it is highly dangerous as a means of propagating the disease; for, as the meat of diseased animals is undoubtedly capable of exciting the disease, the meat must infect everything with which it is brought into contact.

Not long ago we seized the carcases of several animals that had been affected with the disease, and sent to the city markets from Scotland. All along the road, therefore, the infected meat must have been a dangerous source of infection. I write this in haste, and remain

Yours truly,

To the Secretary of the Royal Cattle Plague Commission. HY. LETHEBY.

REMARKS by the Medical Officer on the condition of the slaughter-house in Hosier Lane and of the city slaughter-houses generally.

The slaughter-house in Hosier Lane is situated in a very crowded locality, and it has frequently been a subject of complaint by the inhabitants of the neighbourhood. It stands in a confined space between Hosier Lane, Cock Lane, and Three Diamond Court, near West Smithfield, and there are narrow entrances to it from each of those thoroughfares. The slaughter-house itself is about 38 feet long and 16 feet wide, and there are three stalls or pounds for beasts and one for pigs. At the present time they are killing about 120 beasts and 300 pigs a week, but they have killed in busy time about 200 beasts and 1,000 pigs a week. Every precaution is taken, as far as the observation of the Commissioners' rules is concerned, to keep the place clean and wholesome; but the nature of the trade, the closeness of the locality, and the unavoidable collection of filth, offal, dung, and blood renders it impossible to conduct the business without its being a nuisance to the neighbourhood, and in warm weather the nuisance is almost intolerable, but the Commission has no power to deal with it beyond the enforcement of the rules and regulations which have been made for the management of the city slaughter-houses, and these are found to be insufficient to prevent the place from being a great nuisance from circumstances over which the Commissioners have no control. At present there are 58 such slaughter-houses within the city of London; they are situated in Aldgate; in the Minories; in Great Tower Street; in Bee Hive Passage, Lime Street; in Bishopsgate Street; in Gun Yard, Norton Folgate; in Bread Street Hill; in Fetter Lane; in Fore Street; in Hosier Lane; and in Warwick Lane and Newgate Market, and every one of them is in a crowded locality, and is a subject of more or less annoyance to the neighbouring inhabitants. These slaughter-houses receive about 5,400 sheep, 1,800 beasts, 420 pigs, and 400 calves every week, making a total of more than 8,000 animals slaughtered in the city per week; and although this proportion is absolutely insignificant in comparison with the quantity of meat brought weekly to the city markets, yet it is sufficiently large to be the cause of a monstrous nuisance, for not only is there annoyance from the actual slaughtering of these animals and the filthy condition of the slaughter-houses, but there is also a further annoyance from the driving of the animals to them, and from the carrying away of the dung and offal, besides which there is maintained in the neighbourhood of them a class of offensive trades, such as fat and tripe boiling and gut cleaning, which still further add to the nuisance.

APPENDIX H.

REGULATIONS respecting CATTLE DISEASE in RUSSIA and in BAVARIA.

I. RUSSIA.

(*Transmitted by Sir A. Buchanan.*)

MEDICAL LAWS, 7th Division.

Regarding the measures to be taken towards the effectual warding off of Epidemics among Cattle.

SECTION I.

General Rule.

First Division.

What is to be done by the local authorities with a view to arresting and cutting off the progress of the Cattle Murrain.

1714. If in a town or in one or many villages there should be simultaneously many cases of sick horses, cows, sheep, or other domestic animals, and some of these should die in the course of only a few days, the police of the towns should be immediately informed thereof; and in villages the burgomasters, as soon as they shall have heard of it from those next in office or from unofficial sources, shall immediately impart the information to the police officer of the district.

Observation 1. If the murrain has appeared in a village under the jurisdiction of the department of crown lands, in that case information is immediately given to the heads of the village, and through them is sent on to the rural police, and to the superior local authorities of the department of crown lands, in the manner pointed out in s. 946.

Of the appearance of the murrain in encampments or in villages inhabited by foreigners, colonists, or other temporary sojourners, under the jurisdiction of distinct local authorities, information is forwarded in a similar manner to those authorities whose concern it is, and measures for putting a stop to the spreading of the disease shall be taken by the responsible police authorities within that jurisdiction. More detailed regulations on this head are contained in the statutes of each separate local administration and in the written byelaws supplied to each district office.

Observation 2. For failing to give information of, or omitting to take the prescribed measures for arresting the spread of, the epidemic, the offender or offenders will be subject to the penalties prescribed in ss. 1084–1086.

1715. Having received notice according to the rules mentioned above, the town police will furnish a certificate thereof, and give information to the authorities of the government in the district. The district police officer shall send the information to the rural district court.

1716. The sheriff, accompanied by the police medical officer or a veterinary surgeon, shall at once repair to the spot where the Plague broke out.

1717. Having examined the diseased and disinterred animals, the police or veterinary surgeon shall define the extent and nature of the disease, and then send information to the local authorities, about the nature and principal causes of the disease, the measures to be taken for arresting the progress thereof, the number of animals in the district, the breeds of the same, and the number of those which have died.

1718. The local police shall direct the people to adopt the necessary measures for the prevention and cure of the disease, in accordance with the rules laid down for their guidance.

1719. In villages within the jurisdiction of the department of crown lands the rural police is assisted by the local authorities of this department, viz. those in the villages, districts, and even in the courts, with the veterinary surgeons attached thereto. Their duties on such occasions are defined in the General Government Regulations, and partly in the first book of this code.

1720. The chiefs of provinces, on the appearance of the Cattle Disease in any district, demand full particulars from the local police, and after consultation with all the members of the medical court, or the inspector thereof, or the committee of public health, determine whether the means adopted by the local police for arresting this disease are effectual, and in accordance with the regulations laid down by law. Should these measures turn out to be ineffectual, or wanting in stringency, then, with a view to rendering them more so, the chiefs of the province act in concert with the government medical boards in making the arrangements that may seem to them expedient, according to the nature or degree of severity of the disease. Of the appearance of the disease, of the measures for cutting off its progress, and eventually of the disappearance of the same, they shall duly inform the ministry of the interior.

1721. On the appearance of the Siberian Plague, which is sometimes communicated from cattle to man, the chiefs of provinces shall also take care that this disease should be recognised and treated in accordance with the separate instructions of the medical board, laid down on this head, and that the local police should act, with reference to this disorder, independently of the general instructions on the head of diseases among cattle, and in accordance with separate instructions, which are given hereafter in ss. 1727 and 1728.

1722. The committees of public health, on receiving from any of their members the news of the appearance of epizootic diseases, shall use their utmost endeavours to prevent their spreading, and to put a stop to them, by application of the laws pointed out above in ss. 836 to 842.

Second Division.

The general preventive measures against the Cattle Plague.

1723. The medical council of the minister of the interior shall supply the public from time to time with instructions and guide books for the prevention and treatment of disease among domestic animals; these and similar instructions published by the medical council, with regard to the treatment of human beings, should be within reach of every one, and largely circulated among those who may want them. But, independent of the information and explanations contained in these instructions, the following rules and precautionary measures for the arrest of the disease among cattle must be adopted. (See ss. 1724–1728.)

1724. If the disease which has appeared anywhere amongst the cattle shall be found to have been caught from other cattle elsewhere, or to be infectious or contagious, in this case, previous to the receipt of the necessary instructions from the chief of the province, the following measures shall be immediately taken to prevent the spreading of the infection:—

1. On the least suspicion of an animal's being infected it shall at once be separated from the healthy beasts. As a general rule, on the appearance of the disease amongst them, cattle should not be let out to graze, but kept at home, and strict attention paid to the quality of the fodder, and the cleanliness of the stalls. Should it be impossible, owing to the quantity of cattle at the farm, to keep it at home, then when it is in the fields every care must be taken to prevent its getting near any road along which herds are driven; that the pastures into which it is admitted should not be boggy; and particular attention should be paid to those places where cattle fairs are held, or which adjoin the great thoroughfares through which cattle is driven from distant parts to the place where it is intended to be slaughtered. With this in view, in those villages where the disease has broken out, the cattle shall not be let out into the fields on days when fairs or markets are held, but every proprietor shall keep his stock at home. In the same way, strange cattle should not be admitted into the yards, or allowed to graze with that belonging to the place in question.

2. In summer, separate roomy pens shall be set apart for diseased animals in the fields, commons, or other cool localities, and every villager or shepherd should take care not to endeavour to hide or conceal any cases of disease which he may notice in his flock, but should, on the contrary, at once proceed to drive any animal in which the least trace of sickness is perceptible to the appointed receptacles for infected beasts. In the autumn and winter separate sheds and pens shall be set apart for diseased beasts.

3. For the sale of cattle a place must be set aside, into which the cattle of the place itself shall not be able to find their way, so as to keep the cattle of the place from all danger of infection.

4. Shepherds and cattle feeders shall on no account be allowed to go to places where the disease has broken out. Equally, persons whose cattle shows no traces of disease shall be most strictly forbidden to purchase either openly or secretly, in diseased districts, cattle, meat, milk, butter, hides, melted tallow, or other parts of oxen or other animals, and bring such into not infected districts, either for sale, or for domestic use.

5. Persons who have been about diseased cattle shall not be allowed to come near healthy beasts without first having changed their clothes, and then washed their hands, first in vinegar and then in kvas,* but first of all in a solution of potash. The clothes previously worn must be washed, or hung up in the open air for 24 hours. It is still better to have separate people altogether to look after diseased beasts. Then, on the disappearance of the disease, the clothes of these people may be purified by exposure to the air for 14 days.

6. Dead animals of the horned breed should be removed in carts drawn by horses, but care must be taken to avoid any liquid matter from the carcase dropping along the road, and as a general rule a carcase should not be touched with naked hands.

7. Neither the skin, horns, or hoofs, shall be removed from a dead animal.

8. The carcases of diseased cattle shall be buried in deep holes, far away from the dwellings of man, and from spots where healthy cattle feeds. It is better to choose open spaces for these holes, and not wooded parts of the country, where there would be more danger of the carcases being dug up by wolves or other animals, and thus the disease spread abroad, and besides it is easier to pay more attention to these holes in open spaces.

9. When carcases of diseased cattle are buried the earth should be well trodden down into the hole over them.

10. In summer flies are apt to communicate the disease from diseased to healthy cattle, by settling on their backs alternately; to avoid the danger of this, healthy cattle shall be besmeared with tar.

11. Harness which has been used on diseased cattle shall not be used again until it has been washed with potash water or salt water, and then well aired, and covered with a coat of tar.

12. For the security of travellers, in the time of cattle disease by-roads shall be made, leaving aside those villages where it has appeared, and the old roads shall be blocked up or quite obliterated so long as the infection may be about.

13. Dogs, cats, and domestic fowls should not be allowed to get near either diseased cattle or the carcases of beasts which have died of the disease.

14. All the dirt, litter, dung, &c. of animals that have died should be buried along with their carcases, or, if possible, burnt.

15. In general, whilst the disease is raging both sickly and healthy cattle should be kept in as roomy places as possible, the stalls should be cleaned out frequently, and fumigated with vinegar or kvas, these liquids being poured on the heated bricks or stones of the floors; the beasts themselves should be frequently curry-combed or rubbed down with straw, to keep up the perspiration. Burning juniper, brushwood, dung, &c. is useless, and even dangerous in enclosed places.

16. No food, utensil, rope, or anything which has

* Kvas is the usual beverage of Russian peasants, and is made of stale rye bread mixed with malt, on which boiling water is poured and left until it has fermented.

been in the stable or shed with diseased cattle, shall be made use of again.

17. Healthy cattle, during the time that epizootic diseases are raging, such as the cattle plague, the epilepsy, inflammation of the lungs or such like, shall be fed in summer on grass, and in winter on hay, damped with warm water, and a little salt should be given every day in the food or drink, and if this is done the quantity of food may be diminished.

18. Besides all this, healthy cattle must all have setons inserted; in cows through the skin of the dewlap, and in horses, on the chest. A greased hempen or horsehair cord shall be drawn under the skin, and pulled backwards and forwards several times a day, to keep up a discharge of liquid matter.

19. In other matters it will be necessary to obey the injunctions of the medical men and veterinary surgeons, and to render these every possible assistance to arrest the disease, as well as to carry out the instructions which have been given them.

1725. The medical instructions are contained, as already stated, in separate orders, published and circulated for this purpose; but, before the arrival of the physician or veterinarian, it could do no harm if members of the rural police and every proprietor of live stock were acquainted with and made use of the following simple remedies:—

1. Never to give animals any dry food, such as hay or straw, but grass or hay moistened with warm water; the drink to consist of water boiled with oatmeal, or with oatmeal and barley, or if these are not to be had with bread or rye flour; to this may be added salted cucumbers or sour apples bruised and prepared in the same manner as whey.

2. As soon as an animal ceases to chew the cud give it a salt herring, or if this is not at hand a lump of rye bread which has been licked by a healthy animal; the drink to be eight parts of water with one part of red or white vinegar. A bottle of whey may be used instead, or even kvas.

3. If the animal be very hot kvas grounds may be beneficially employed, as well as beer yeast, with saltpetre, or with common salt. Take half a pail of yeast or grouts, and add a handful or two of saltpetre, or instead of this the same quantity of common salt, mix well, and give the animal a bowl of it three, four, or five times, as the case may be.

4. For the same purpose one may make use of the brine in which cucumbers have been salted, or cucumbers themselves mashed to the consistence of porridge.

5. If the animal be troubled with constipation, at once give it half a bottle full of hemp or linseed oil, well mixed up with an equal quantity of barley water. If no effect be produced in two hours then repeat the dose, and, should the animal refuse to take it, pour it down its throat.

6. If the animal be suffering from diarrhœa give it the drink alone, without salt, as directed in the first part of this paragraph.

7. If the animal have pustules in the mouth, they or the tongue must be rubbed with clear vinegar, mixed with honey or treacle, or with corn brandy and salt water in equal proportions. The rubbing must be done with a sponge, or a bit of rag fastened on to a stick.

8. Should the feet be swollen or benumbed make incisions in them, and when the blood flows wash them with vinegar and corn brandy; cracks in the hoof may be rubbed with tallow, butter, or oil, mixed with turpentine.

9. When there are swellings on the neck or between the legs, apply roasted onions at once, mixed with equal parts of garlic, and mustard, or horseradish, so that suppuration might soon come on; the abscess to be opened with a sharp instrument, and oil with turpentine applied as indicated in Part VIII.

1726. To avoid any evil consequences to which even men are sometimes subject to, in times of severe epidemics among cattle, particularly in hot weather, the following precautionary measures must be taken:—

1. Men who are attending on sick animals should, before going near them, wash their hands in vinegar, and tar their gloves. On leaving the animals they should wash their hands again.

2. Diseased animals should not be made use of for food, as dangerous fevers may arise therefrom.

3. If a fly, after having been sitting on a diseased or a dead animal, should bite or sting a man, he should immediately rub the place with warm olive or hempseed oil, preferably the former. Should the swelling not go down a plaster of flour, treacle, and bruised onions, should be applied, for the sake of creating a blister; and when this latter has gone down, the place should be rubbed with hempseed oil. In the meanwhile he should drink freely a mixture of vinegar and warm water, and dress warm to keep up a perspiration.

1727. In the event of the breaking out of the Siberian Plague, the duties of the police, besides the regulations specified above in ss. 1726 and 1724, will include the following:

1. Not only to prohibit all communication between sick and healthy cattle, but also between people who have to look after diseased cattle, and those who are in attendance upon healthy beasts.

2. To secure a continual and unremitting attention, during the presence of the Plague, to the rule that the flesh of the diseased beasts should not be used for food, a thoroughly practical *employè*, and one well conversant with the feature of the disease, shall be resident at all the slaughtering places, who shall see to the condition of health of cattle brought to be slaughtered; and should any meat turn out to be bad, he shall order the same to be removed immediately to places which shall be specially appointed for it, and there it shall be buried, as hereafter specified.

3. Milk, and even butter and cheese, from infected animals are bad for food, and therefore when there is any milk which has come from diseased animals it should not only be prohibited to use such for food, but it shall not even be given to herbivorous cattle, and the employed official shall see it thrown away in his presence, in a place which shall be set apart for the purpose.

4. Towards the end of the disease the wooden and other articles that have been in contact with diseased animals must be washed in a solution of chloride of lime, or else fumigated with strong hydrochloric acid. Things made of metal should be made red hot, the earth removed to the depth of 14 inches, and replaced by new earth. The walls of the stables to be washed with a strong solution of potash, or still better, with a solution of chloride of lime several times, then whitewashed, and exposed to the air for 14 days, before healthy cattle is put in them.

5. The dead animals must be conveyed a considerable distance from any habitation, and buried at least three arshines (7 feet) deep; and in order to prevent persons from disinterring animals for the sake of the skins, it is necessary to cut these into small pieces, before the animal is buried, so as to render them useless to any one hereafter.

1728. The surgeon and attendants who are on duty where the Siberian Plague is prevalent are to observe the following precautions:—

1. To take every precaution to prevent any liquid from a diseased animal from coming into contact with the face or eyes.

2. The hands should be rubbed with fat or oil.

3. Those troubled with pustules, chaps, or scratches in the face, and more particularly those who have such on their hands, should not come near the diseased animals, and carefully avoid touching their sores.

4. As a general rule, neither the mouths nor sores of diseased animals should be touched with the naked hand.

5. The carcases shall not be cut open until they have had time to get cold.

6. Should any pestilential fluid come in contact with any delicate part of the human body, that part must be rubbed immediately with a solution of salt, chloride of lime, potash, lime water, or a weak solution of hydrochloric acid.

7. When the disease has passed, the clothes and everything which has been in contact with sick or diseased animals should be exposed to the fumes of concentrated muriatic acid, and well aired, or, what is still better, burnt. The whole body to be then washed with soap and water, until which is done neither surgeon nor the attendants who had been in contact with the diseased animals shall be able to mix with the people, without imminent danger both to themselves and to the people.

1729 to 1734 contain certain rules to be applied in the Semipalatine district and that of the Siberian Kirghis, of no interest whatever.

Transcribed and translated by

FREDERIC STILL,
H. B. Majesty's acting Consul, St. Petersburg.
GEORGE L. CARRICK, M.D.

II.—BAVARIA.

(Transmitted by Lord A. Loftus.)

A General Précis of the Rules and Regulations in Bavaria for the prevention and suppression of the Rinderpest, commencing with the year 1788, contained in Vol. XV., from page 534 to 714, and in Vol. XXX., from page 184 to 202, of the Bavarian "Administrativ-Verordnung."

Rules laid down in Ordonnance of 18th July 1788 refer to—

I.—Police regulations to be taken previous to the outbreak either in the country or any separate locality in the country.

II.—Police regulations to be taken when the disease has appeared, to prevent its spreading.

III.—Police regulations when the disease has disappeared, to prevent its return.

Under Tit. I. are ordered:

Inspection of all horses, cattle, in every place.

For this purpose, in every district, every person is obliged to give in a list of his cattle.

Inspection of all cattle imported from other countries, also all cattle sent to markets or fairs to undergo inspection previous to their entry into the fair or market.

Diseased, or sick, or convalescent cattle are forbidden to be grazed in the open fields.

Cattle to be watered with pure water, with a small portion of vinegar or salt.

Cattle never to be driven out to pasture before an hour after sunrise, and never during the early fog or frost; should be previously fed with a handful of forage.

Cattle never to drink out of dirty or standing pools.

The night pasturage to be wholly avoided.

Under Tit. II.:

1. Separation of the diseased from the sound cattle.
2. In places where the disease has shown itself no cattle, either sound or diseased, to be allowed entry or exit.

   All cattle, sound or diseased, in a diseased place or district, to be marked with the two first letters of the name of the place.

   The diseased ones to be in addition washed in red oil colour on the horns.

   In any diseased district or locality neither straw nor hay nor wood to be allowed exit.
3. Prevention of spreading of the disease by men.

   No person attending on diseased cattle to be allowed to attend or approach sound cattle except at least in fresh clothes. None attending such cattle to be allowed to do so wearing any woollen apparel.
4. To prevent contagion by the hides, excrements, by other animals, etc.

   All carcases of diseased cattle to be buried in pits 8 feet deep, not too many together, and to be transported thither in barrows or on litters.

   These pits to be prepared ready in an infected district, to be buried by men especially appointed, and who do not approach afterwards the sound cattle.

   No remains of diseased cattle to be kept to feed dogs, etc.

   The dung of diseased cattle to be burnt.

   Care to be taken that no portion of the diseased cattle be thrown into rivers or on roads, or on dung heaps, or into woods.

   All dogs, cats, or pigs which may have eaten of any proceeds of diseased cattle, to be killed immediately, and to be buried 8 feet deep.

   The hides of diseased cattle to be only taken off the carcase at the place of interment, and to be then given to appointed tanners to be steeped in lime.

   Should the hides show much of disease, they are to be buried with the carcase.
5. Prevention of the spreading of the disease among men by eating diseased meat.

   By *public* slaughter-houses

   In all places where are butcher-stalls or shambles.

   The slaughtering and sale of meat in houses is prohibited by a strict supervision of all meat by properly appointed officers, in places where no butcher-stalls or shambles exist.

   Also by prohibiting secret sale of meat.

Tit. III.—Police regulations on the disappearance of the disease to prevent its return, are—

1. All utensils used by diseased cattle to be burnt.
2. All utensils of iron to be passed through the fire.
3. The barrs to be renewed or at least to be planed, and washed in quick lime-water for 14 days.
4. The wooden or paved flooring to be taken up.
5. The earth to be removed 1 foot deep and replaced with new.
6. The walls scratched.
7. The wooden stalls and coverings, and the pavement on which the forage has lain, to be washed repeatedly with alealine, and afterwards with lime.

   The stall to be smoked daily with juniper berries, vinegar, and camphor, to be well aired and not be used again for two months after the last diseased cattle was in it.

   Further, the hay and after grass, straw, and even the short straw, either above or in the vicinity of the diseased stable, to be again taken to the meadow and remade, and then mixed with herb forage after two months, but not to be given to the newly purchased cattle.

   The cattle recovered from the disease only to be allowed in the pasture 6 weeks after convalescence.

ANNEX to Decree of 9th June 1796.

Medicinal Information.

The Hornviehseuche, which has in so many places completely devastated Bavaria, is no new malady. In this century it is now its fourth appearance, and threatens the cattle with the same devastation as in the years from—

1713 to 1716
1729 to 1735
1742 to 1745

It was so severe and fatal, that in Bavaria and Suabia it was very rare to see a head of horn cattle. Several names have been given to this disease,—

Löserdörre,
Uebergallung,
Ruhr, etc.

* (Löserdörre is a real typhus boum orientalis, the other are synonymous.)

None of these, however, exactly corresponds with its nature, and might easily mislead in the adoption of remedies. The name is real malevolent Hornviehseuche, and its nature an entire relaxation of the vital strength, and disposition of all the juices to rapid corruption or putrefaction.

However rapidly the disease kills, three stages can be clearly given,—

1. The period of infection.
2. That of the outbreak.
3. That of the course of the disease.

SYMPTOMS of the first period.

a. A loathing for food and drink.

This loathing is not continuous. It passes off, and the animals only lose their entire appetite when the disease has actually broken out or is on the point of doing so.

b. A sparing and dry evacuation.

c. Mites or the so-called Dörrwürmer in the mouth.

d. A small quick pulse. It is felt on the extreme jaw. In a healthy state 35 to 40 pulsations are felt in a horse or cattle per minute.

e. Unequal changing warmth. The horns and the ears of a diseased animal are sometimes entirely, sometimes only partially cold, sometimes warm. The same intermittence of heat is observable on the skin.

f. A slight cough. When an animal gives this symptom, or when one or two in the locality dies, or has been killed in consequence of this symptom, it may be certain that the outbreak of the disease will take place in a few days.

In this case are to be adopted—

1. The Police Regulations (as aforegiven).
2. Only a third of the usual forage should be given to the diseased animal.
3. A decoction of strongly boiled barley or linseed, with vinegar, should be given to the animal to drink.
4. A leather soaked in vinegar and Spanish flies, or a cord of the same, or also the winter aconite (Christwurz, helleborus niger, now less used for this purpose than for embrocating any diseased part of the skin,

and as an emetic) to be placed on the Triel (the protuberant part of the chest, between the fore limbs of cattle).

5. This leather must remain on three weeks, and the rising of the blister be washed every morning with tepid water. If the rising should be considerable,
6. The wound must be opened with a lancet and creased with basilicon ointment or fresh butter.
7. Every morning powder No. 1. must be given to the animal.
8. The kauprügel (an instrument used in veterinary science to effect the breaking upward of the wind in the abdomen in case the inflation is tympanitic), which is tied at the ears to the horns, must be put into the mouth of the animal, left there half an hour, and then
9. The mouth cleanly washed out with No. 2.; an hour afterwards moderately fed.
10. Every evening the medicine No. 3. must be given, the kauprügel put into the mouth, the mouth washed out, and an hour afterwards fed.
11. If the symptoms mentioned under *a*, *b*, *c*, *d*, &, disappear, the animals may be said to be well, and the course of remedy mentioned partially, but not all at once, discontinued. It cannot be determined in how many days an infected animal may require to be restored, the experience has proved that this course of remedy continued for eight days is sufficient to protect cattle not infected, and to insure them against the disease, if the prescribed medicines are given once or twice a week. With cattle treated in this manner and afterwards slaughtered, it was found on opening them that the entrails, and, what is especially to be noted, the gall-bladders, were in their normal state. Only the four ventricles and bowels had something unnatural, and appeared as if they had been washed out and wrinkled.

The gall was thinner, more watery. The blood let out from the veins before being slaughtered was black, and could not be brought to congeal, but remained like watery brine, half liquid.

Proofs of the outbreak.

In a few days the second stage commences; the symptoms are—

1. Cold horns, ears, and members.
2. Shivering of the whole body, and especially of the hind legs.
3. Bristling of the hair.
4. Gnashing of the teeth.
5. Shaking of the head.
6. Involuntary rising from the stomach, whereupon follows heat, and the diseased animal lays itself on the straw.
7. Breathing quickly, with oppression.
8. The heat is especially in the horns and ears, but more particularly observable by the
9. Pulse, which often mounts to 85–90 pulsations per minute. From thence the state of the animal is most dangerous, and the disease hourly increases. The animal should not be left or abandoned; it should be given—
   a. During the shivering, No. 5. if the first period should have been neglected; then
   b. Place on the animal the leather blister as remarked in No. 4, and in case it should not draw—
   c. Two blistering plaisters or vesicatories on the tender skin in the inside of the hind legs; see Vol. VI.
   d. Still more efficacious is the burning with a hot iron the spot where the leather is set.

During this period the animal refuses all forage and drink. Milk cows lose their milk, and those with young throw their calves. The dung is dry and the evacuation, as likewise the urine, is attended with pain. The eyes are dim and begin to run, as also the nostril. The teeth are now compressed and the breath is of ill odour.

The animal shows evidence of great pain. Animals killed in this state give proof in the entrails of disease. The gall-bladder is larger than in the natural state. The gall itself is dissolved and has a bad smell.

The course of the disease.

However bad the disease may yet have been, it now proves worse, and in addition to the afore-named symptoms there are the following fresh ones:

a. Malevolent croup or quinsey. The mites, so called dörrwurmer, become abscesses or ulcers, extend themselves over the tongue, in the mouth, and in the swallow. The breath of the animal thence becomes putrid, and swallowing very painful.

b. Abscesses under the skin.

c. Swelling of the hinder part of the stomach, with a rumbling noise; and lastly,

d. A watery diarrhœa, often mixed with blood, very putrid.

In this state the animal is past saving and dies on the 4th, 5th, or 6th day.

Nevertheless, sometimes on the latter day the diarrhœa diminishes, an equal warmth extends over the whole body, and a considerable number of small abscesses appear on the skin of the animal. These are of good omen. The animal then lives over the 9th, and is well on the 12th. It is requisite, therefore, to assist nature in saving the animal, and for this purpose is given No. 7. as there prescribed.

Weakening remedies, such as purging, blood-letting, &c., are of no avail, and only render the recovery hopeless. Consequently the following recipes are recommended.

Recipes.

No. 1.

Take of powdered roots—

Angelica and enzian - - -	1 lb.
Rhubarb - - - -	1 lb.
Pure tartar - - -	1½ lb.

of this mixture 2 spoonfuls or 2 ozs. are to be given daily in a maas Bavarian measure (2 pints English) of tepid water.

No. 2.

Take raw barley, a handful, boil it in a maas (2 pints) of water till it rises; strain it off, and add to it 4 lath (2 ozs. English) of alum, (or in want of that, kitchen salt and vinegar,) some spoonfuls of honey, for rinsing out the mouth.

No. 3.

Take asafœtida 3 lath (or 4 ozs. English), 4 lath (or 2 ozs.) of gum arabic or camphor, dissolved in spirits of wine; 2 maas (or 4 pints English) of vinegar (from wine); to be well shaken, and give from 8 to 16 spoonfuls every evening.

No. 4.

Take a handful of camomile or common milfoil, or any other bitter smelling herb and blossoms; for instance, wormwood, centaury, sage, &c.; pour into a maas (2 pints) of boiling water; let it stand a quarter of an hour in a covered vessel; strain it off, and add thereto a quarte (½ pint English) of (wine) vinegar. To give to the animal after the medicine.

No. 5.

Take of the infusion No. 4. 2 pints (maas), and add thereto and give from 2 to 4 spoonfuls of elderberry jelly (holdersulze, baobsambuci).

No. 6.

Take gum plaister (gummiplaster) as much as necessary; spread it on 2 pieces of linen, each piece 6 inches long and broad. Spread thereon Spanish fly powder, 2 drs. on each, so that the borders of the plaister are free. If the skin is raised, and the blister open, smear the open wound with butter, cover it with the given plaister, and wash it daily twice.

No. 7.

Take 3 lath (1½ ozs. English) of powdered quin-quina, or peruvian bark; pour on about half a maas (1 pint) of scalding water. When it has become tepid add to it ½ drachm of camphor, rubbed up with gum arabic, 1 quarte (½ pint) of Austrian wine. This mixture to be given every 6 hours. In the interval a linseed decoction or No. 4. without vinegar.

General Observations.

Since 1711 the Rinderpest has carried off, in Germany, more than 25,000,000 of cattle. On calculation 3 out of 4 die.

In Germany the Rinderpest has appeared in all seasons, is neither arrested by heat nor cold, spares neither young nor old, is dependent on no external circumstances, such as bad nourishment, damp, or noxious influence.

It is alone conveyed through infection and contagion, and is most easily conveyed.

The slaughter of the first animal infected is the best means of preventing the spread of the disease.

These animals are reimbursed; and the expenses attendant on the measures to be taken generally for the suppression of the disease are incurred in the first instance by the Kreis District or Circuit. (See Vol. XV. page 593.)

In 1813 fresh regulations were issued by the Bavarian Government. They will be found in Vol. XV. from page 593 to page 616.

They are mostly of the same nature as the foregoing, published in 1788, and do not afford any further knowledge as to the disease itself.

Regulations were further published, 9th July 1822, respecting another disease in cattle, called the milz-seuche or milz-brand (anthrax), a fatal distemper among cattle by which the milk turned into a black fluid.

The mode of treatment and the symptoms of this disease, which is completely distinct from the rinderpest, are given in Vol. XV. from page 617 to 624.

On the 9th June 1835 an ordonnance was published in Bavaria, stating that as the cattle disease, then raging in Austria, was the lungenseuche combined with the milzbrand and with the löser dörre (typhus bovum orientalis), or the rinderpest, the public are duly informed to apply the remedies for the former above referred to, published in 1822, and not those in 1813 against the rinderpest. See Vol. XV. page 651.

From page 654 Vol. XV. to page 691, for the information of the public, are published the regulations for the general prevention and suppression of the cattle disease by the King of Prussia, and dated Berlin, April the 2d, 1803.

Vol. XXX., page 193, contains the Report of the Veterinary College of Munich, addressed to the King of Bavaria, on the Rinderpest, which is deserving of notice; it is dated Munich, 10th November 1844.

ART. 363, § 2. OF THE PENAL CODE.

Whoever wilfully or unintentionally contravenes the prohibition of importation, the measures of repression, or control, and other preventive measures which have been ordered by direction of the head police, for protection against the entry, aggravation, spread, or return of contagious cattle diseases, and likewise publicly made known, or such regulations communicated to him personally by the proper local and district authorities, shall be punished by arrest or by fine up to the amount of 150 florins, and if in consequence of contravention foreign cattle should be seized by the disease, he shall be punished with imprisonment up to one year, or fined up to the amount of 400 florins.

ARTS. 122 & 123 OF THE POLICE PENAL CODE.

Art. 122.—Whoever avoids, or does not in the right time submit sheep and other domestic animals to, the inspection ordered by the head police for the prevention of sheep-rot and other cattle diseases, shall be fined up to the sum of 10 florins.

Art. 123.—Whoever, after having perceived symptoms of a contagious disease in an animal belonging to him or in one intrusted to his care or charge, does not forthwith keep the animal at a distance from the places where the danger of the contagion of foreign animals exists, and does not give the local authorities notice thereof, or does not call in a veterinary surgeon authorized to practise for the treatment of the animal, shall be punished by a fine of up to 25 florins.

Should any symptoms of hydrophobia show themselves in an animal it must be killed immediately or rendered otherwise harmless, in default whereof the previous punishment is to be enforced.

APPENDIX I.

HUNGARY and AUSTRIA.—INFORMATION respecting the RINDERPEST.

(Transmitted by Lord Bloomfield.)

MY LORD, Vienna, 25th October 1865.

WITH reference to your Lordship's despatch, No. 100, circular of 9th instant, I have the honour to forward herewith a memorandum by Mr. Harriss respecting certain cattle diseases in Hungary, in which is enclosed a paper containing a detailed account of the Rinderpest, and of the epizootic forms of anthrax.

I have, &c.,

The Earl Russell. (Signed) BLOOMFIELD.

Enclosure 1 in preceding letter.

NOTES relating to Cattle Diseases in Hungary.

During a recent short visit to Pesth and Pressburg, I heard several opinions expressed respecting the two Cattle Plagues known in Hungary, namely, the so-called Rinderpest and the so-called Blood-plague (Blut-seuche). As these opinions were for the most part given by persons whose knowledge of the subject is of many years' standing, the following chief points in them may not be uninteresting.

The Rinderpest is also called the Blätter-dürre, which may be considered to mean a dryness of the "Blätter," or the "Blätter-mogen," the German word for the manyplies of a ruminant. This name may arise from the opinion generally held that the Rinderpest is essentially a disease of that organ, or rather that the Rinderpest begins by a diseased state of that organ, and that this diseased state causes all that follows. It is stated that the manyplies becomes unnaturally dry, and if after death the carcase be dissected, the food in that organ will be found in so dry a state as to crumble into dust. The real Rinderpest, being a disease of the manyplies, can only be a disease peculiar to ruminating animals. I understand that there have been instances in which it has attacked sheep, and also goats, in Hungary; but the black cattle have always been the most severely and by far the more frequently attacked. That the Rinderpest is introduced directly or indirectly from the neighbouring Empire of Russia seems to admit of no doubt, but whether or not it may be introduced by miasma, as well as contagion, seems an open question. In favour of the miasma theory it is asserted that there have occurred cases of a breaking out of the Rinderpest inexplicable by the theory of contagion merely. It is hep that a miasma may be wafted from the infected country into the hitherto healthy district, and that therefore, in spite of the strictest "cordon" system, the Rinderpest may break out in healthy places. In so far, therefore, as miasma may be a cause, the "cordon" system must be ineffectve. As to the contagiousness of the disease there seems to be little doubt; but I did not succeed in ascertaining, or rather in obtaining sufficiently exact information to indicate, how far this contagiousness may depend upon predisposing circumstances, and how far this so-called contagiousness may be due to the influence of miasma. It was however asserted, that the contagiousness is so great that with a straw from an infected stable half a dozen healthy stables could be infected. It would therefore seem that, though no "cordon" system or other precautions could prevent a breaking out of the Rinderpest from the influence

of miasma, yet such measures perfectly carried out might more or less prevent the spreading of the disease. In Hungary the "cordon" system is not implicitly and universally relied upon. Indeed there seems to be an idea that it would be better not to rely upon any such measures, but rather to adopt inoculation as a preventive. So far is this the case that an impression exists that such inoculation will be soon rendered obligatory by law. As far as I could learn, inoculation has been successfully tested by experiment. I mean that it has been so far tested that inoculated animals have in infected districts escaped the Plague. But time only can show whether the good effects of the inoculation are lifelong, or sufficiently lasting to warrant the necessary expenditure. There would of course be an additional, and comparatively rather large additional, expense incurred by the cattle owner. There would also be a probable mortality from inoculation of two or three per cent. But perfect immunity would be worth securing at even a greater cost in Hungary, which is so liable to attacks by the Rinderpest.

Arsenic, which has been in England mentioned as a remedy, or rather as a preventive against the Rinderpest, does not appear as far as I could learn to have been used in Hungary. The steam bath has been used successfully, but I did not obtain an exact idea of how far its use may have lessened the mortality. The Rinderpest is certainly not considered in Hungary to be incurable. The short time I passed in Pesth did not, however, admit of my obtaining the details of the various methods of cure that have been tried, or the statistics of the success or failure of any such experiments.

There is in Hungary another cattle disease, which is also looked upon as a plague, for it is frequently as fatal as the Rinderpest. It is called the Blood-plague, and in a milder form an inflammation of the spleen. This disease has attacked horses as well as cattle, and might, I presume, attack any animal; whereas the Rinderpest is from its very nature peculiar to ruminating animals. The horses, which are said to have recently died in England of Rinderpest, may have really died of this disease. In Hungary the Blood-plague, or a kindred form of disease, if it breaks out at all, breaks out after a more than usually hot and dry season, and if I am well informed it may even become fatally epizootic. The late season in England has been unusually hot and dry, and may consequently have there produced this disease. As inflammation of the spleen it is probably as well known in England as in Hungary. But it may be that the disease has assumed in England the more virulent form, already known in Hungary.

Arsenic appears to have been employed with some success in the cure of sheep, as a remedy, and as a preventive against the Blood-plague. It is therefore possible, in the case lately reported in the "Times" of the use of arsenic in Debreczin as a preventive against a plague which had broken out amongst horses, that the disease was really this Blood-plague or one of its kindred forms. A preventive that appears to be more relied upon is to make an entire change in the usual food of the animals, if they have been principally fed upon dry food, let them be fed upon green food, and so on. The Blood-plague is indigenous, and seems to be produced only by unfavourable seasons. However epizootic and fatal the disease may become, there appears to be some doubt as to its being very contagious, or even always contagious.

The enclosed paper is written by a Hungarian who is well known at Pesth as a practical agriculturist (œconom), and who has had in Hungary a long and large experience in the management of cattle and in the treatment of the Rinderpest.

The first portion of the paper is devoted to an examination of the disease anthrax, and to its various kinds, of which the epizootic forms may become veritable plagues; one of these forms is the so-called Blood-plague previously mentioned.

As regards horses, the symptoms of anthrax are detailed at length, and its indications on dissection are also stated. The causes of the disease (as far as they appear to be known), and the cases in which it may become contagious, are mentioned. And lastly, the treatment that has been advantageous, and the precautionary and preventive measures that may be usefully taken, are stated in detail.

As regards cattle and sheep a corresponding account of anthrax is given, and in conclusion the varieties of the disease are separately described, and their treatment, and the necessary precautionary and preventive measures are set forth at length.

With respect to the Rinderpest, it is stated that the disease is peculiar to ruminating animals, is contagious, and is not indigenous in Hungary; and it is further stated that the Rinderpest can only attack the same animal once in its life. The earliest symptoms (which appear from the fourth to the eighth day of incubation) and the subsequent symptoms are very fully described. The chief and most reliable indications of the disease on dissection are next given. The various media of infection are enumerated. And lastly, an advantageous method of treatment and the use of inoculation as a preventive measure are fully described.

I may add, that I have not described the use of the steam bath, as the method employed in Hungary corresponds to the method already known in England, of digging a pit, employing a large steam kettle, and so arranging everything that the animal shall be thoroughly steamed without injury to the respiration, and without subsequently taking cold.

Vienna, October 25, 1865. J. P. Harriss.

Extract from Enclosure 2.

Translation furnished by Home Office.

Cattle Plague (Löserdürre, Übergalle).

A febrile contagious malady, peculiar to all ruminants, as *cattle, sheep, goats,* and *deer,* which does not attack the same animal more than once in its life, which is not developed with us originally, but is always introduced from some neighbouring country on the east. When once introduced the malady spreads by means of a very active [intensive] contagious matter, of which ruminants of every race, age, sex, constitution, &c. are susceptible, either directly or indirectly; it lasts a long time, and by the enormous losses attendant upon it gives rise to a universal distress throughout the country, as the Austrian States at various times, and even recently, have but too abundantly experienced.

Symptoms. After infection has taken place an interval of from four to eight days occurs, during which the animals are apparently perfectly well. The sick beast shows the first striking signs of malady by a change in its manner; most commonly it is seen to be remarkably heavy and dull; it hangs its head, lowers its ears, stays behind the herd, and when in the stable keeps away from the crib. Another animal will be excited, uneasy, shaking its head, stamping with its feet, lowing frequently, butting with its horns, and running away from the herd; if tied up in the stable it tears away from the chain and rope, and continually endeavours to go elsewhere. Any one looking more attentively at the animal may perceive now and then trembling motions of the head and neck; the hairs bristle up, especially on the back and towards the shoulders; the insertion of the horns and ears are sometimes cold,—sometimes warm; the palate [flotzmaul] is dry; the eyes shining; the mucous membrane of the nose is redder than usual, red spots appear on that of the mouth; with these signs the animal loses its appetite, or looks for food rarely. At the same time rumination either ceases entirely or only takes place irregularly; the dropping of the dung is delayed, and it is of a dark colour, sometimes covered with slime on the surface; and many animals show signs of bellyache, by frequently looking round towards the tail and bending up its back. The breath now becomes more short and quick, joined with a striking motion of the flanks, and loud groans, and sometimes a short and dry cough supervenes, which is the cause of much uneasiness to the animal.

After these symptoms have continued for some days an increased separation commences in the mucous membranes of the eyes, nose, and mouth, and the eyes in consequence overflow with viscid, slimy tears; an abundant yellow or bloody stringy discharge comes from the nostrils, which gradually becomes white and fetid, and a tough viscid slime also flows from the corners of the mouth, and at the same time there are found on the mucous membrane of the mouth, especially between the under lip and the gums, small blisters, which often cover the whole inside of the mouth; the sick beast grinds its teeth, which are very loose. The dung now becomes soft and pappy, and at length liquid, and not unfrequently coloured with blood; it is usually dropped with effort, in small quantity, frequently repeated. The general weakness and leanness makes rapid progress, the eyes sink in, the sight is weak, air-tumours rise on the back under the skin, groans and difficulty of breath become continually more violent, the ichorous discharge from the open fundament flows involuntarily, and finally the beast cannot stand any longer on its legs, but lies on its side, with the head turned, until at once, generally between the fifth and ninth day, in very bad cases between the third and fourth, death comes on with convulsions, and puts an end to its sufferings.

When the malady takes a favourable turn the attacks are more moderate in degree, and they gradually subside; the skin becomes warm, and remains so; appetite and rumination return; the looseness diminishes, and by degrees the

dung recovers its normal condition; the emaciated animals soon get well, and recover their former liveliness. In convalescence a scabby eruption very often appears on the skin, accompanied by itching, especially on the nape of the neck or the sides of the neck, and on the back. Cows with calf generally miscarry; but after that they very frequently recover.

As the knowledge of the Cattle Plague, acquired from the symptoms during life, chiefly at the commencement of the epidemic, is not quite positive, it is of the utmost importance, for the advancement of that knowledge, to examine those sick beasts that have died or have been killed, and therefore the most essential appearances after death are here noted down as follows:—

On looking at the outside of the carcase the hair is seen bristly; a whitish slime appears at the corners of the eye and at the nostrils, partly dried to a bark; the hind-quarters are much swollen; the mucous membrane of the intestines, projecting through the fundament, is of a bluish-red colour; the tail and buttocks are dirty with excrement. On opening the body much air comes forth, which diffuses a bad smell. The first two divisions of the stomach are more or less filled with crude sour-smelling food, and their membranes are friable and infiltrated, and blood-spotted here and there. The third stomach is usually full to swelling, and sometimes distended to a considerable size; also it is sometimes firm and sometimes soft to the touch, and in accordance therewith the contents are sometimes solid and dry, often so much so as to be capable of rubbing to powder, in cake-shaped layers squeezed together between the compartments, and sometimes damp, pappy fodder; in the former case the mucous membranes lining the walls of the stomach appear in places ragged and loose, and sticking to the fodder; in the latter case the mucous membrane is very much softened, and the surface skin easily removable. The rennet stomach [laabmagen] and the thin guts [dünn-darm] always exhibit the most striking change; on the outer surface they are more or less discoloured, covered with livid spots and bare places, and when cut up the mucous membrane appears dark red, and covered with a tough, adhesive, slimy fluid, discoloured, frequently of a greyish black. The whole canal of the intestines is more or less filled with fœtid gases; the liver is generally friable, and of a clay yellow; the gall-bladder is much distended with thin yellowish green gall. The spleen is generally unchanged; the lungs appear shrivelled, pale, or discoloured, and sometimes much swollen; the branches of the wind-pipe are filled with a purulent frothy liquid.

The *propagation* of the Cattle Plague with us takes place, as above stated, only by the conveyance [verschleppung] of infectious matter [contagium]. This contagium is developed in every animal infected with the Cattle Plague in the beginning of the malady, and it continues during the whole course of it. It is of its nature partly volatile, partly fixed, and it adheres to the expired air, to the vapour of the blood, to the transpiration of the skin, as also to all the fluids and remains [ueberreste] of the diseased animals, as also to all articles that have been in contact therewith. The contagium is likewise operative to a considerable distance and when largely diluted, and for this reason it is easily spread by currents of air and by media of every kind. The malady once settled in a district is consequently extended further and further, through the intercourse between the inhabitants of infected villages and those uninfected, through butchers, tanners, quack doctors, &c., by giving food or drink which has been touched by infected cattle, by the free wandering about of domestic cattle, or by numerous other circumstances which are often difficult to be traced. The shortening of the duration of the epidemic is therefore especially dependent on the strictest possible carrying out of the veterinary police measures directed to combating the epidemic, and to the entire extirpation of the pestilential matter.

Even the *curative treatment* is subordinate to this object, and it can be taken into account only so far as those measures of themselves alone are not sufficient to set a barrier to the entrance of the malady into a given district, together with the condition that no further infection can proceed from the sick beasts under treatment.

In regard to curative treatment, it is practically demonstrated that not one of the remedies recommended sometimes as specifics by the allopathists has ever done anything of importance in the majority of cases, nor has homœopathy led to the discovery of any specific. Although the malady as a principle exhibits itself pretty constantly as a process of exsudation on the mucous membranes of the alimentary ducts and the air vessels, yet it offers many differences in regard to symptoms and to its details, which would require in any given case that the choice of the remedy to be employed should be modified. In the cattle disease which prevailed rather extensively in a part of Hungary in 1855 and a part of the following year, a very satisfactory result was obtained with sick cattle of strong constitution by the following treatment:—

In the commencement of the malady, where, soon after the appearance of fever, pain in the hind quarters, hurried breath, dry cough, and a retarded discharge of hard and dry fæces, were present, four to eight drops of the essence of bryonia were exhibited, and repeated at intervals of two to four hours, and with this a striking improvement was experienced in the majority of cases, after 24 to 48 hours. When especial excitement and restlessness were present, the treatment was changed to doses of belladonna, with a similar good result. Phosphorus to the sixth degree of dilution has shown itself salutary in cases where the breathing was not only much hurried but also very difficult, and attended with frequent painful coughing, sighing, and moaning, and at the same time an abundant yellow or blood-streaked tenacious discharge had taken place from the nostrils. When in the further course of the malady the peculiar diarrhetic scouring supervened, when, with raised up back, a very fœtid cinnamon brown liquid excrement, mixed with slime and blood, was dropped with much effort, then sometimes hellebor. nigr., sometimes mercur. sublimat. corrosiv. in the sixth dilution, has been found salutary. Acid muriat., which has been applied with very favourable results in another epizootic, has led to nothing this time. The arsen., also recommended by Gunther, was of no use, A remedy worth notice is solanin. According to a private communication it was said to be used in another comitat in 1850, as well by itself as alternately with arsen., with very favourable results.

In *regard to dietetics** it is requisite to put the sick beasts in moderately warm stables, not windy, but admitting of ventilation; they may be in sheds partly open in the summer; they should be rubbed frequently, and likewise covered in case of its being necessary, and they should be always supplied with fresh water to drink, not too cold. The accumulation of many sick animals in one stable has always been found to have a very injurious influence on the continuance of the malady. If, during the improvement in health the appetite returns, it may be at once gratified with only small portions of easily digestible food; in the season of pasturage the pasture will do its part without further care.

As a *preservative* means against the ravages of the Plague, the inoculation with the Rinderpest *contagium* has been several times proposed and carried out.

In 1861 and 1862 the inoculation with Cattle Plague contagium produced several successful results in the neighbourhood of Pesth. The inoculation of the cattle was effected by scraping with a sharp knife first the inner soft surface of the skin of the left fore foot, and then that of the ear, until the places were very red and hot, but without drawing blood. These surfaces, amounting to one or two square inches, according to the age of the animal, were then rubbed well in with the lymph gathered from *convalescent* beasts, in which a rag was dipped. The mucous discharge from the mouth, the nostrils, and the corners of the eyes, mixed together in equal parts, was employed as lymph. It was gathered with a pewter (blechern) spoon, and brought in well secured phials hermetically sealed, each of which was marked with the name or number of the animal from which it was taken. This was done with ten animals, and the glasses were then deposited in a cool place. Then out of these ten bottles those were chosen that had come from convalescent beasts which had already so far got over the malady that appetite and rumination had returned, and it was from the lymph of these only that the yet healthy cattle were inoculated. All the rest of the lymph was destroyed, and buried deep with the vessels.

* Experience showed that such lymph hermetically sealed would remain fit for use from 40 to 60 days at the utmost.

(Signed) JAMES EGAN.

Pesth, 22d October 1865.

MY LORD, Vienna, 26th October 1865.

WITH reference to your Lordship's despatch, No. 100 circular of the 9th instant, I have the honour to state to your Lordship that on the 16th instant I requested Count Mensdorff to be good enough to furnish me with any information the Imperial Government might possess respecting the Rinderpest and other epizootic diseases, and particularly with regard to any new method of treatment or of precaution and prevention that may have been adopted in Austria.

I have also the honour to enclose, in copy and translation, by Mr. Harriss, a note in reply from the Ministry for Foreign Affairs, from which it appears that the Rinderpest

* The Germans use the word in the sense of hygiene generally, not food only—Tr.

has nearly died out in Austria, and in which the further information desired by Her Majesty's Government is promised on a future occasion.

I have, &c.

The Earl Russell. (Signed) BLOOMFIELD.

Enclosure 1 *in preceding letter.*

[Translation.]

In reply to the esteemed note of the 16th instant, a copy of a communication from the Department of the Interior, dated the 3d instant, respecting the Cattle Plague in the imperial territories under the control of that central office, is herewith transmitted to his Excellency Lord Bloomfield, with the additional remark that the Cattle Plague has entirely died out in the provinces on the other side of the Leitha, according to reports that have been received from the competent authorities, and that it only appeared in August in the village (gemeinde) Mikosfalu of the district (comitat) Wieselberg, where also it disappeared on the 25th of the same month.

Whilst reserving to himself the opportunity of making a further communication to his Excellency respecting any new methods employed against that plague in this country, and also respecting any preventive measures, the undersigned avails himself, &c.

For the Minister of Foreign Affairs,
(Signed) MEYSENBUG,
Under-Secretary.

Vienna, 23d October 1865.

Enclosure 2.

[Translation.]

COPY of a NOTE of the DEPARTMENT of the INTERIOR to the MINISTRY for FOREIGN AFFAIRS, dated Vienna, 3d October 1865.

With respect to the esteemed note of 25th September last, the Minister has the honour to communicate that amongst the provinces under its control the Rinderpest rages only in the eastern part of Galicia, in eleven places of the district (kreis) of Zolkiew, in six of Lezezann, and in two in each of the districts (kreis) called Czorskow, Lemberg, Zarnoyol, and Przemzsl, and in one place of the district of Zlozow. Out of 11,977 head of cattle, and 1,667 diseased cattle, there are now, after the slaughtering usual in cases of such outbreaks, only 88 diseased cattle in 16 places, and no diseased animal at all in the other above-mentioned places, and these latter, therefore, are now passing through the prescribed period of 21 days' quarantine (observation).

In Lower Austria there were two cases of Rinderpest at the beginning of last month amongst imported cattle from Hungary. The two diseased animals, and the other cattle on the infected premises, were slaughtered, and no further case has occurred, and consequently, after the lapse of the 21 days' quarantine, Lower Austria has been declared free from Cattle Plague.

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